



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

May 1, 1989

RECEIVED
MAY 03 1989

**DIVISION OF
OIL, GAS & MINING**

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Exception to Location for the proposed Exploratory Well Sugarloaf #4-1, Surface and Bottomhole located NW1/4 SE1/4 2233' FSL and 1792' FEL of Section 4, T31S, R23E, San Juan County, Utah. Lease #U-60520, Non-Unit Well.

Gentlemen:

Marathon Oil Company requests administrative approval from the Division for an exception to the location and siting requirements of R615-3-2 in association with the above referenced well.

The well, Sugarloaf #4-1, is proposed to be drilled with the surface and bottomhole being in the NW1/4 SE1/4 of Section 1, T31S, R23E. This location is being chosen due to geological interpretation.

Marathon Oil Company is the owner and operator of all lands within a 2233' radius of the proposed Sugarloaf #4-1 well. Because of this administrative approval is being requested as set forth in R615-3-3. Please refer to Attachment '1' for further clarification. Your continued cooperation is greatly appreciated.

Sincerely,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'R P Meabon'.

R. P. Meabon
Regulatory Coordinator
Rocky Mountain Region

RPM/FMK/rrm

Attachment

SELF CERTIFICATION STATEMENT

Be advised that Marathon Oil Company is considered to be the operator of Well No. 4-1, NWSE, 1/4 1/4, Section 4, T31S, R23E, B&M Lease U-60520, San Juan County, Utah, and is responsible under the terms and conditions of the lease for the operations conducted on the leased land.

Bond coverage for this well is provided by Bond No. 2279791 (Principal \$150,000.00) via surety consent as provided for in 43 CFR 3104.2.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1A. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

B. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with State and Federal regulations)

1792' FEL & 2233' FSL NW1/4 SE1/4
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 20 miles Northwest of Monticello, Utah

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drilg. unit line, if any)

2233'

15. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

16. NO. OF ACRES IN LEASE

2597.20

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

19. PROPOSED DEPTH

5500' Desert Creek

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6264' Ungraded GL

22. APPROX. DATE WORK WILL START*

ASAP

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	1250'	340 Sacks to Surface
7-7/8"	5-1/2"	15.5#	5500'	Suff. to Surface Casing Shoe

Marathon Oil Company proposes to drill the above referenced well through the Desert Creek formation to an estimated TD of 5500'. A 12-1/4" hole will be drilled to approximately 1250' and 1250' of new 9-5/8", 36#, K-55, ST&C casing will be set and cemented to surface. A 7-7/8" hole will then be drilled to the TD of 5500' and 5500' of new 5-1/2", 15.5#, K-55, ST&C casing will be run and cemented, if shows are favorable. The well will then be completed as an Ismay producer.

BLM-Orig & 3-cc:SUDOGM-2, WRF, FMK, GBP, Drilling-3, Title & Cont. (Hous.)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

R P M Lehen

TITLE

Regulatory Coordinator

DATE May 1, 1989

(This space for Federal or State office use)

PERMIT NO.

43-037-31464

APPROVAL DATE

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

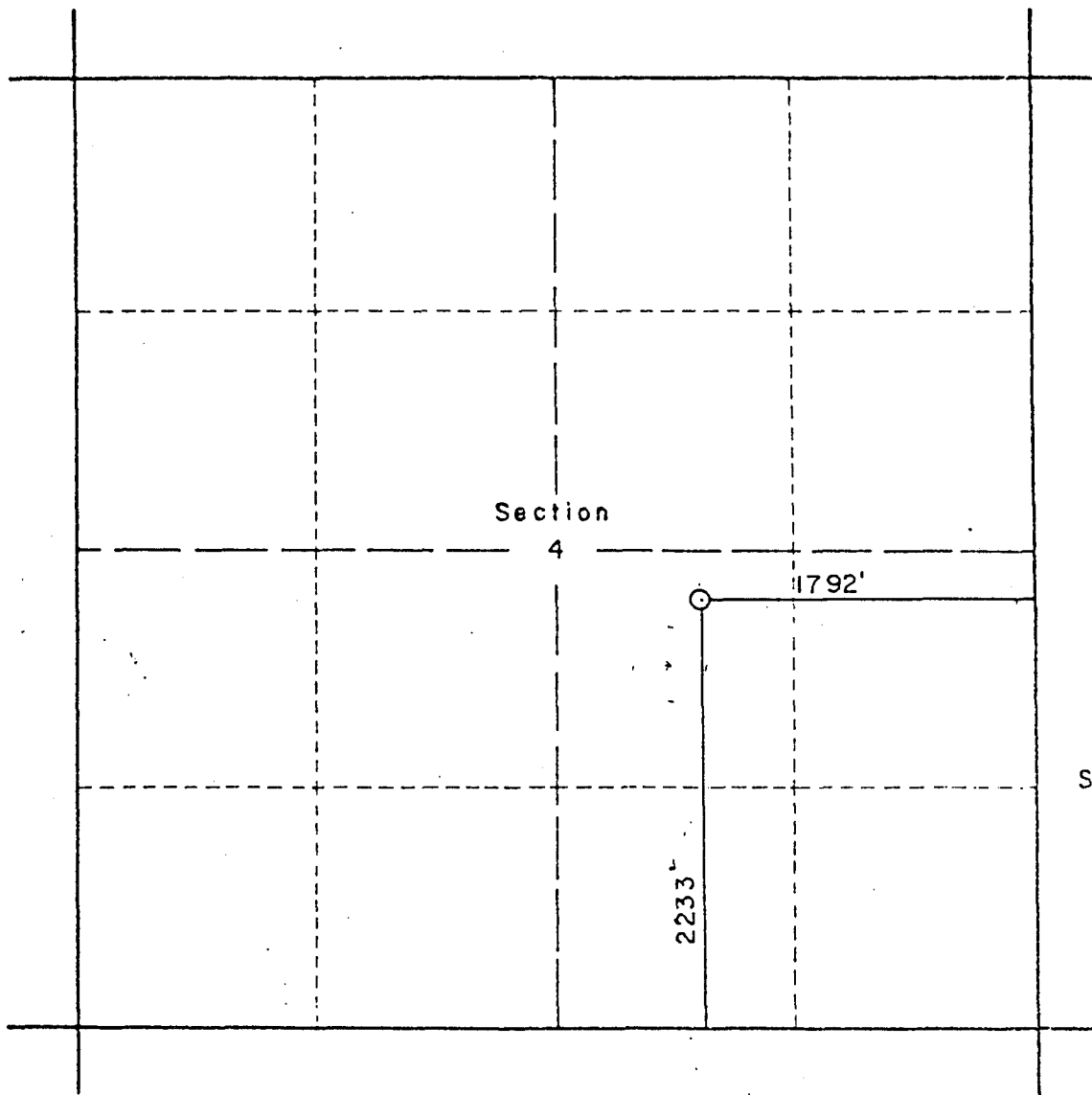
APPROVED BY

TITLE

DATE 5-25-89
BY *John R. Dyer*
WELL SPACING: R/L 15-3-3

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side



Scale: 1" = 1000'

WELL LOCATION: MARATHON - SUGAR LOAF NO. 4-1

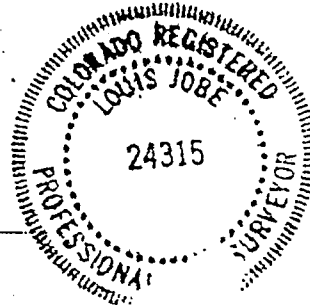
Located 2233 feet North of the South line and 1792 feet West of the East line of Section 4
 Township 31 South, Range 23 East, Salt Lake Meridian

Existing ground elevation determined at 6264 feet based on USC&G Datum of 6002 (D21-1983)

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief

Louis Jobe
 Louis Jobe

Registered Land Surveyor

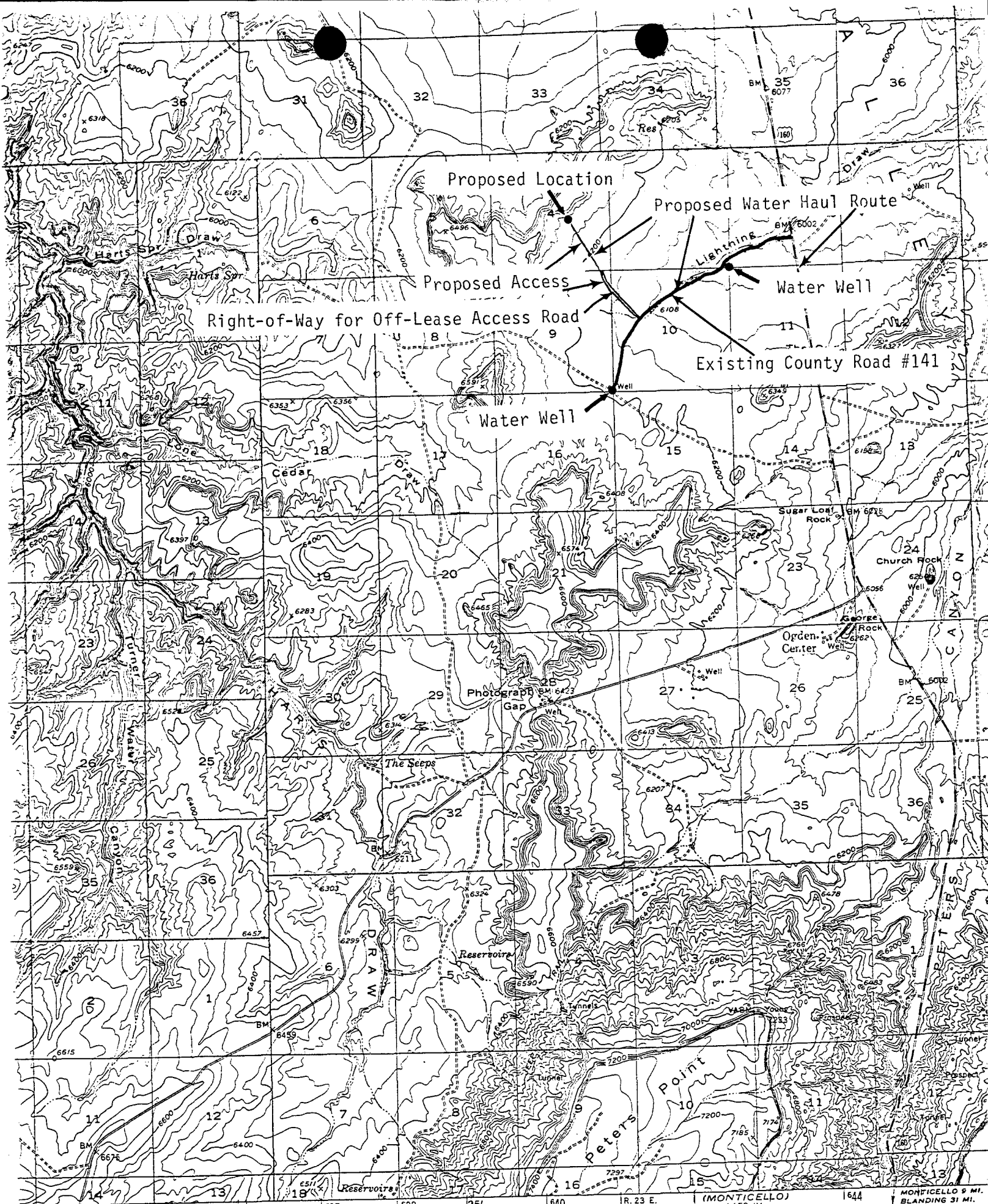


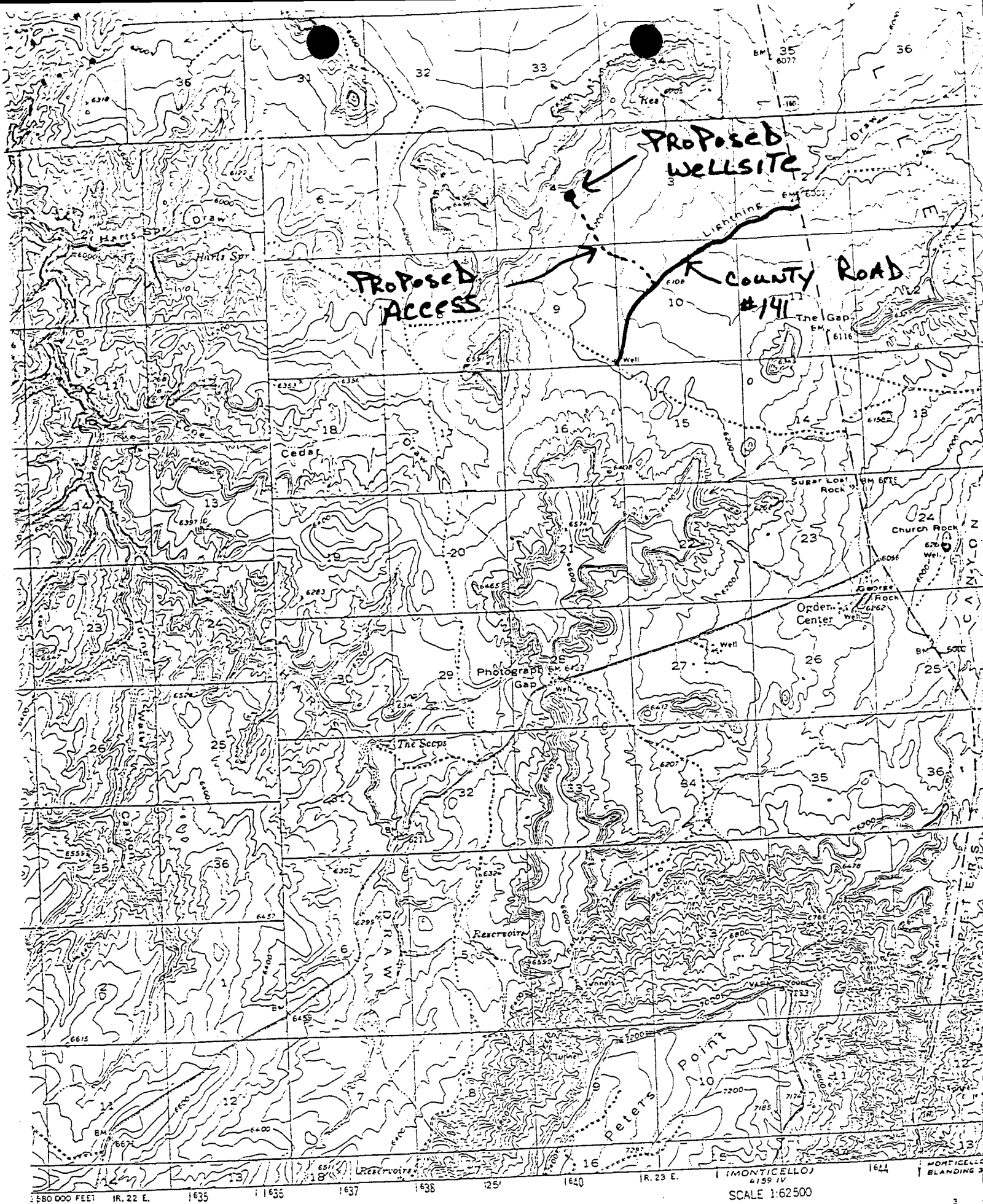
MARATHON OIL CO.
 CODY, WYOMING

WELL LOCATION PLAT
 Sugar Loaf No. 4-1
 Sec. 4, T31S, R 23 E, SLM
 San Juan County, Utah

CLARK - REED & ASSOC.
 DULUTH, MINN.

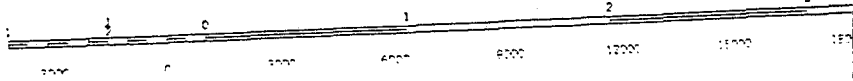
DATE: April 13, 1989
 FILE NO 89010





and published by the Geological Survey
of USC&GS

rial photographs by multiplex methods



NOTIFICATION

Notify the San Juan Resource Area, at (801) 587-2144 for the following:

2 days prior to commencement of dirt work, construction or reclamation;

1 day prior to spudding;

1 day prior to running and cementing surface casing;

Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:

No well abandonment operations will be commenced without the prior approvals of the District Manager. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed.

Dale Manchester, Petroleum Engineer Office Phone: (801) 259-6111

Home Phone: (801) 259-6239

Lynn Jackson, Chief, Branch of Fluid Minerals

Office Phone: (801) 259-6111

Home Phone: (801) 259-7990

24 hour advance notice is required for all abandonments.

BUREAU OF LAND MANAGEMENT
MOAB DISTRICT

CONDITIONS OF APPROVAL FOR PERMIT TO DRILL

Company: Marathon Oil Company Sugarloaf Well No.: 4-1

Location: Sec: 4 T. 31S R. 23E Lease No. U-60520

Onsite Inspection Date: April 13, 1989

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his sub-contractors. A copy of these conditions will be furnished the field representative to ensure compliance.

A. DRILLING PROGRAM

1. Surface Formation and Estimated Tops: Refer to Item #2 of the attached Drilling Operations Plan.
2. Estimated Depth at Which Oil, Gas, Water, or Other Mineral-Bearing Zones are Expected to be Encountered

	<u>Formation</u>	<u>Depth</u>
Expected Oil Zones:	Refer to Item #2 of the	attached Drilling Operations Plan.
Expected Gas Zones:	Refer to Item #2 of the	attached Drilling Operations Plan.
Expected Water Zones:	Refer to Item #2 of the	attached Drilling Operations Plan.
Expected Mineral Zones:	Refer to Item #2 of the	attached Drilling Operations Plan.

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling will be recorded by depth, cased, and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment: Refer to Item #7 of the attached Drilling Operations Plan.

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and

operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. Casing Program and Auxiliary Equipment: Refer to Item #5 of the attached Drilling Operations Plan.

Anticipated cement tops will be reported as to depth, not the expected number of sacks.

5. Mud Program and Circulating Medium: Refer to Item #6 of the attached Drilling Operations Plan.

Blooi line will be misted to reduce fugative dust when air drilling.

6. Coring, Logging and Testing Program: Refer to Item #3 of the attached Drilling Operations Plan.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted to the District Office not later than thirty (30) days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the Moab District Manager.

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards: Refer to Item #4 of the attached Drilling Operations Plan.

8. Anticipated Starting Dates and Notifications of Operations:

Required verbal notifications are summarized in Table I, attached. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the District Office within twenty-four (24) hours after spudding. If the spudding occurs on a weekend or holiday, the written report will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 3160-6, "Monthly Report of Operations", starting with the month in which operations commence and continuing each month until the well is physically plugged and abandoned. This report will be filed directly with the BLM, Moab District Office, P. O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

Should the well be successfully completed for production, the District Manager will be notified when the well is placed in producing status. Such notification will be sent by telegram or other written communication, not later than five (5) business days following the date on which the well is placed on production.

A first production conference will be scheduled within fifteen (15) days after receipt of the first production report. The Resource Area Office will coordinate the field conference.

A "Subsequent Report of Abandonment" (Form 3160-5) will be filed with the District Manager within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the Area Manager or his representative, or the appropriate surface managing agency.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The marker will be constructed as follows: Above ground pipe. The top of the marker will be closed or capped.

The following minimum information will be permanently placed on the marker with a plate, cap, or beaded-on with a welding torch:

"Fed" or "Ind", as applicable. "Well number, location by 1/4 1/4 section, township and range". "Lease number".

B. THIRTEEN-POINT SURFACE USE PLAN

1. Existing Roads:

- a. Location of proposed well in relation to town or other reference point: Approximately 20 miles North of Monticello, Utah.

- b. Proposed route to location: Refer to attached map.
- c. Plans for improvement and/or maintenance of existing roads: N/A (County Road #141).
- d. Other: An encroachment permit will be obtained from the San Juan County Road Department (801) 587-2231, Ext. 43.

2. Planned Access Roads:

- a. The maximum total disturbance width will be 30 feet.
- b. Maximum grades: 0% to 10%.
- c. Turnouts: N/A
- d. Location (centerline): Flagged (plat attached).
- e. Drainage: Upgrade road to Class III Standards once production is established.
- f. Surface Materials: Native from pad area.
- g. Other: Road will be flatbladed until production is established (for exploration).

Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed will be approved by the Area Manager in advance.

The access road will be rehabilitated or brought to Resource (Class III) Road Standards within sixty (60) days of dismantling of the drilling rig. If this time frame cannot be met, the Area Manager will be notified so that temporary drainage control can be installed along the access road.

- 3. Location of Existing Wells: Two (2) water wells, refer to attached map.
- 4. Location of Tank Batteries and Production Facilities:

All permanent (onsite for six (6) months or longer) structures constructed or installed (including oil well pump jacks) will be painted a flat, nonreflective, earth tone color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six (6) months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will be as follows: Sand Dunes Tan.

Exact composition of facilities will be submitted via Sundry if production is established.

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the largest tank in the battery.

All loading lines and valves will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7-4 regulations will be adhered to.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

Gas meter runs for each well will be located within five hundred (500) feet of the wellhead. The gas flowline will be buried from the well head to the meter and downstream for the remainder of the pad. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three (3) months on new meter installations and at least quarterly thereafter. The Area Manager will be provided with a date and time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration reports will be submitted to the Resource Area Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement.

5. Location and Type of Water Supply:

All water needed for drilling purposes will be obtained from: Grayson Redd Reservoir (Monticello Airport). A temporary water permit application is attached. An approved copy has not been obtained to date.

A temporary water use permit for this operations will be obtained from the Utah State Engineer, in Price, Utah (801) 637-1303.

Water obtained on private land, or land administered by another agency, will require approval from the owner or agency for use of the land.

6. Source of Construction Material:

Pad construction material will be obtained from: Natives.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.1-3. Source of construction material will be located on lease.

7. Methods of Handling Waste Disposal:

The reserve pit will be lined if determined necessary during construction.

Three sides of the reserve pit will be fenced with 4 strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

All trash must be contained and disposed of by: Trash will be contained in a steel cage and hauled to an approved landfill as necessary.

If burning is required, a permit will be obtained from the State Fire Warden, Jack Mortensen 587-2237 (permit required May 1 through October 31).

Produced waste water will be confined to a unlined pit for a period of not to exceed ninety (90) days after initial production. During the ninety (90) day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

8. Ancillary Facilities:

Camp facilities will not be required.

9. Well Site Layout:

The reserve pit will be located: North.

The top six (6) inches of soil material will be removed from the location and stockpiled separately on Northeast.

Topsoil along the access road will be reserved in place adjacent to the road.

Access to the well pad will be from: Southeast.

The trash pit will be located: A cage will be used.

10. Plans for Restoration of Surface:

Immediately upon completion of drilling the location and surrounding area will be cleared of all remaining debris, material, trash and junk not required for production.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

All disturbed areas will be recontoured to the approximate natural contours.

The stockpiled topsoil will be evenly distributed over the disturbed contours. Sufficient topsoil will be saved and seeded for future reclamation of area used for production.

Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface. Rip six (6) inches deep with rips eighteen (18) inches apart.

Seed will be broadcast or drilled at a time specified by the BLM. If broadcast, a narrow or some other implement will be dragged over the seeded area to assure seed coverage. October 1 through February 28.

The following seed mixture will be used:

<u>1</u>	lbs/acre Indian ricegrass	_____
<u> </u>	lbs/acre Galleta	_____
<u>3</u>	lbs/acre crested wheatgrass	_____
<u>2</u>	lbs/acre Western wheatgrass	_____
<u>1</u>	lbs/acre Sand dropseed	_____
<u> </u>		_____
<u>1</u>	lbs/acre Fourwing saltbush	_____
<u> </u>	lbs/acre Shadscale	_____
<u> </u>	lbs/acre Desert bitterbrush	_____
<u> </u>		_____
<u>1</u>	lbs/acre Small Burnett	_____
<u> </u>	lbs/acre Yellow Sweetclover	_____
<u>1</u>	lbs/acre Wild sunflower	_____
<u> </u>	lbs/acre Sagebrush	_____

The reserve pit and that portion of the location and access road not needed for production facilities will be reclaimed.

11. Surface and Mineral Ownership

BLM - Surface and Minerals.

12. Other Information: A right-of-way application for off-lease portion of access road is attached. Proper fees will be submitted when notified of amount.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR 3162.3-2.

The dirt contractor will be provided with an approved copy of the surface use plan.

All persons in the area who are associated with the project will be informed by the holder/operator that they will be subject to prosecution of disturbing archaeological sites or paleontological sites, or collecting artifacts or fossils.

Any cultural and/or paleontological resource discovered by the holder/operator, or any person working on his behalf, on public or federal land shall be immediately reported to the authorized officer (BLM-San Juan Resource Area Office (801) 587-2141). The holder/operator shall immediately suspend all operations in the area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder/operator will be responsible for the cost of evaluation of the discovery and of any required mitigation measures. Any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder/operator and other affected parties.

This permit will be valid for a period of one (1) year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.

13. Lessee's or Operator's Representative and Certification:

Representative

Name: Fred Schneider

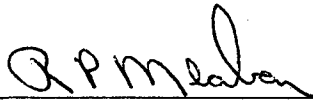
Address: P. O. Box 2690

Cody, Wyoming 82414

Phone No. (307) 587-4961

Certification:

I hereby certify that I, or persons under by direct supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions which currently exist, that the statements made in this plan are, to the best of my knowledge, true and correct, and that the work associated with operations proposed herein will be performed by Marathon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



R. P. Meabon
Regulatory Coordinator

May 1, 1989

Date

MARATHON OIL COMPANY
 Sugarloaf #4-1
 AFE#6-232-9
 Drilling Operations Plan
 2233' FSL, 1792' FEL
 Sec. 4, T31S, R23E (Surface Location)
 San Juan County, Utah
 Elevation: 6280' KB (est)
 6265' GL (Before Grading)

April 19, 1989

1. Sugarloaf #4-1 will be drilled as an Ismay producer. Gas has been encountered in the Honaker Trail in wells in the area. Lost circulation is possible in the Navajo formation. The actual TD and mud program will be subject to the amount of Salt drilled below the Upper Desert Creek.
2. Estimated tops of important geologic markers:

<u>Formation</u>	<u>Depth (TVD RKB)</u>	<u>Depth (From Sea Level)</u>	<u>Possible Content</u>
Navajo	Surface	+6265'	
Chinle	1235'	+5045'	
Shinarump	1680'	+4600'	
Cutler	1945'	+4335'	
Honaker Trail	3830'	+2450'	Gas-low probability
Paradox	4790'	+1490'	
Upper Ismay	4900'	+1380'	
Upper Ismay Carbonate	4920'	+1360'	Oil
Hovenweep	5030'	+1250'	
Lower Ismay	5070'	+1210'	
Lower Ismay Carbonate	5135'	+1145'	Oil
Gothic	5164'	+1116'	
Upper Desert Creek	5214'	+1066'	
Salt	5224'	+1056'	
TD	5500'	+ 770'	

3. Sample, logging, testing, and coring program:

DLL-GR-Cal from TD to +50' into surface casing with GR to Surface.

LDT-CNL-GR from TD to +50' into surface casing.

BHC-Sonic from TD to +50' into surface casing.

2 DST's are anticipated, one in the Upper Ismay and one in the Lower Ismay.

2 Cores are anticipated, 120' in the Upper Ismay and 60' in the Lower Ismay.

Samples will be caught, bagged, and dried in 30' intervals from 1000' to 3600' and then in 10' intervals to TD or as specified by the Company Representative.

Mud Loggers will be present from surface casing to TD.

4. Pressures and temperatures:

Maximum anticipated bottom hole pressure is 2025 psi.

Maximum anticipated bottom hole pressure is 1950 psi at the top of the Lower Ismay.

Maximum anticipated bottom hole temperature is 128°F.

5. Casing and Cementing program:

<u>Min. Hole Size</u>	<u>Casing O.D.</u>	<u>Grade</u>	<u>Weight</u>	<u>Setting Depth</u>	<u>New Or Used</u>	<u>Conn.</u>
22"	16"		42.0#	80' GL	New	PE
12 1/4"	9 5/8"	K-55	36.0#	1250' RKB	New	8rd ST&C
7 7/8"	5 1/2"	K-55	15.5#	5500' RKB	New	8rd ST&C

9 5/8" Surface Casing

Casing equipment will include a float shoe and insert float. Centralizers will be placed on the bottom 3 joints and at the top of every third joint to the surface. Only weighted preflushed will be used.

Casing will be lowered into the hole slowly enough to avoid excessive surge and swab pressures. Mud volumes will be monitored throughout the job.

Lead Slurry:

Type:	Lite weight and additives
Top of Cement:	Surface
WOC:	8 hours or 500 psi compressive strength
Slurry Weight:	12.7 ppg
Yield:	1.84 ft ³ /sack
Cement Required:	Approx. 340 sacks (100% excess)

Tail Slurry:

Type:	Class "G" with additives
Top of Cement:	1000'
WOC:	8 hours or 500 psi compressive strength
Slurry Weight:	15.8 #/Gal
Yield:	1.15 ft ³ /sack
Cement Required:	140 sacks (100% excess)

Note: If the cement falls in the annulus a 1" top job will be performed.

5 1/2" Production Casing

Casing equipment will include a float shoe, a float collar, centralizers, and scratchers. Bow-type centralizers will be spaced every joint across the productive interval. Cable-type scratchers will be run every 15' across the productive interval.

The casing will be reciprocated/rotated during circulation prior to cementing and during placement of the first stage cement, if hole conditions permit. Casing will be lowered into the hole slowly enough to avoid excessive surge and swab pressures. Mud volumes will be monitored throughout the job. At least 10 bbls. of water will precede the cement.

Final cement volumes will be based on Caliper log results.

Lead Slurry:

Type: Light-weight
Top of Cement: Surface
Slurry Weight: 12.7 ppg
Yield: 1.84 ft³/sack
Cement Required: 505 sacks (gauge hole and casing/casing annulus volume + 20% excess)

Tail Slurry:

Type: Class "G" with additives
Top of Cement: 4500'
Slurry Weight: 15.8 ppg
Yield: 1.15 ft³/sack
Cement Required: Minimum of 180 sacks (gauge hole volume) + 20%

6. Mud Program:

<u>From</u>	<u>To</u>	<u>Type Mud</u>	<u>Weight</u>	<u>Oil%</u>	<u>Water Loss</u>
0'	1250'	Gel/Water	8.3-8.7	---	No Control
1250'	3800'	Water	8.4-8.6	---	No Control
3800'	TD	LSND*	8.8-9.0	0-3	10-12 cc's

* If a significant section of the Salt is to be drilled, it may be necessary to convert to a stable salt system.

Clear water will be used to 3800' if hole conditions permit. Possible lost circulation exists in the Navajo formation. LCM and Barite will be on location at all times.

7. Well Control:

- A Diverter system will be used while drilling the surface hole.
- Below surface casing the well control system will be arranged as shown on the attached "Well Control Schematic". All equipment exposed to wellbore pressure will be rated at 3,000 psi or greater. The equipment will meet or exceed (and be tested) per API Guidelines and/or governmental requirements for 3,000 psi systems (including Onshore Oil & Gas Order #2 dated Nov. 18, 1988).

- Test pressures will be as follows:

<u>Item</u>	<u>Low Pressure Test</u>	<u>High Pressure Test</u>
Annular	500 psi/5 min	1500 psi/10 min
Pipe Rams (against casing)	500 psi/5 min	2464 psi/10 min*
Pipe Rams (against plug)	500 psi/5 min	3000 psi/10 min
Blind Rams (against casing)	500 psi/5 min	2464 psi/10 min*
Blind Rams (against plug)	500 psi/5 min	3000 psi/10 min
Casing	none required	1500 psi/30 min

- * 70% of API rated internal yield of surface casing.

- If a test plug is used, no bleed-off of test pressure is acceptable. When tested against casing, the high test pressure will be 70% of the casing internal yield rating and a bleed-off of 10% in a 30 minute period is allowed.
- Casing will be tested prior to drilling out the cement plug (.22 psi/ft or 1500 psi whichever is greater). Test pressure will not exceed 70% of the casing internal yield pressure rating.
- Prior to drilling out the cement plug, the accumulator precharge will be checked and an API Accumulator and Pump Performance Test will be performed.
- Auxiliary equipment will include the following items:
 - . Diverter system for surface
 - . Upper kelly cock (Kelly Safety Valve)
 - . Drill string safety valve(s) for all string components
 - . Pit volume totalizer
 - . Stroke counter
 - . Mud flow sensor
 - . ROP, hookload, and pump pressure pen recorder
 - . Drill string float
 - . Lower kelly cock (optional)
- Additionally the following procedures will be followed:
 - . Each tour slow pump rates will be recorded.
 - . Each tour the well control system will be inspected and the accumulator pressure recorded.
 - . "Trip Sheets" will be filled out on all trips.
 - . BOP drills will be scheduled and conducted each week. Each crew will carry out a weekly BOP drill on their first tour after drilling out from under the surface casing; during this drill the annular will be functioned.
 - . A formation integrity test will be carried out before drilling out from under surface casing and any subsequent casing, with a maximum equivalent of 16#/gal and a minimum equivalent of 12.5#/gal.

8. Deviation Control:

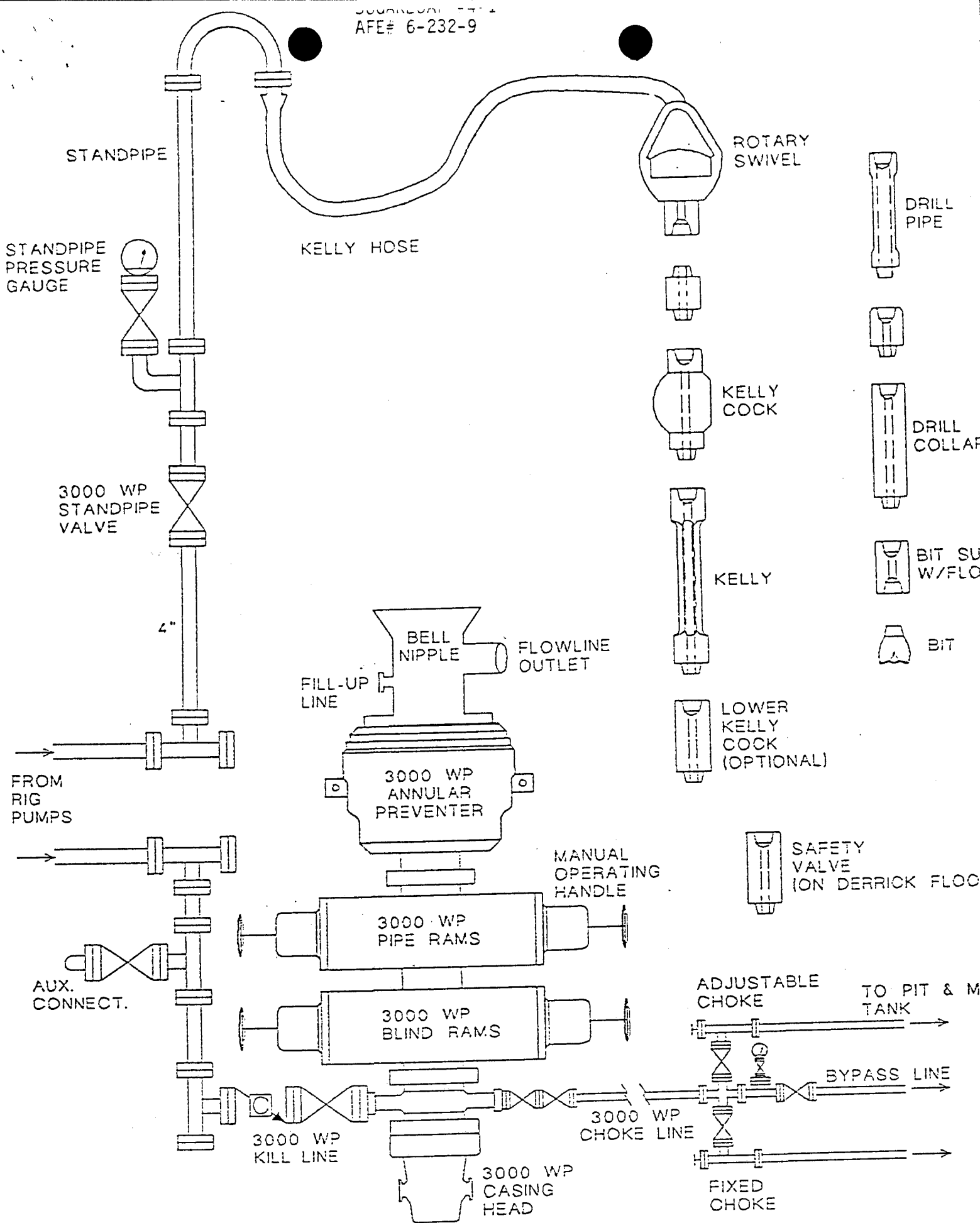
Surface Location: 2233' FSL, 1792' FEL
Sec. 4, T31S, R23E

Bottom Hole Location: 2233' FSL, 1792' FEL
Sec. 4, T31S, R23E

The well will be directionally monitored to allow natural drift.

9. The anticipated duration: 21 days

If you have any questions concerning the drilling plan feel free to contact Fred Schneider or Tom Cowper at Marathon's Cody, Wyoming Office, (307)587-4961.



CASING DESIGN

Well Sugarloaf #4-1 AFE # 6-232-9

Hole Size	Shoe Depth	T.O.C.	Casing O.D.	Drift	Grade	Wt. #/ft	Conn.	Tension - 1000 lbs			Collapse - PSI			Burst - PSI		
								Rating	Load	S.F.	Rating	Load	S.F.	Rating	Load	S.F.
12 1/4	1250	Surface	9 5/8	8.765	K-55	36.0	ST&C	423K	39.2	10.8	2020	585	3.4	3520	923	3.8
		API Rating						423K			2020			3520		
7 7/8	5500	Surface	5 1/2	4.825	K-55	15.5	ST&C	222	73.4	3.0	4040	2717	1.4	4397*	2999	1.
		API Rating						222			4040			4810		

*Negative biaxial adjustments made to rated strengths

ARCHAEOLOGICAL SURVEY OF
MARATHON OIL COMPANY'S
SUGARLOAF 4-1 WELL PAD AND ACCESS ROAD
SAN JUAN COUNTY, UTAH

LAC REPORT 8925

By
Steven L. Fuller

LA PLATA ARCHAEOLOGICAL CONSULTANTS
P.O. BOX 783
DOLORES, COLORADO 81323
(303) 882-4933

April 15, 1989

FEDERAL ANTIQUITIES PERMIT
88UT57626
UTAH STATE PERMIT
U89-LA-125b

Prepared for:
Marathon Oil Company
P.O. Box 2690
Cody, Wyoming 82414

ABSTRACT

The archaeological survey of Marathon Oil Company's Sugarloaf 4-1 well pad and access road was conducted by personnel of La Plata Archaeological Consultants on April 13, 1989. The project is located in San Juan County, Utah on lands administered by the Bureau of Land Management, San Juan Resource Area. A 100 foot wide corridor was surveyed along the 5200 foot access road and a 650 by 650 foot area (10 acres) was surveyed surrounding the well center stake. No archaeological sites were recorded during this survey and archaeological clearance is recommended for the project.

INTRODUCTION

On April 13, 1989 the archaeological survey of Marathon Oil Company's Sugarloaf 4-1 well pad and access road was conducted by Steven L. Fuller of La Plata Archaeological Consultants. The survey was requested by Mr. Frank Krugh of Marathon Oil, who accompanied Fuller during the survey. Others present during the survey included Mike Wade from the BLM, Lou Jobe from Clark-Reed Associates, and representatives of construction companies and other Marathon employees. The wellpad and access road are on lands administered by the Bureau of Land Management, San Juan Resource Area and are in San Juan County, Utah.

The project is located in T31S, R23E, Section 4, SE 1/4; Section 9, NE 1/4; and Section 10, NW 1/4. The UTM coordinates for the well are 4219990N/640380E; the UTM coordinates for the southeast end of the access road are 4218650N/641310E. The project is included on the Photograph Gap, Utah 7.5' series topographic map (Figure 1).

PHYSIOGRAPHY AND ENVIRONMENT

The project is located on the northwest edge of Dry Valley overlooking Lightning Draw to the southeast. A sandstone mesa that forms the northwest border of Dry Valley is immediately to the northwest of the proposed location. The access route proceeds from the center of the valley, near the head of Lightning Draw, northwest to the location which is situated on alluvial fans at the base of a sandstone slickrock slope.

The soil in the project area is moderately deep and is formed on fine, reddish sandy material which may be partially wind-deposited and partially washed down from

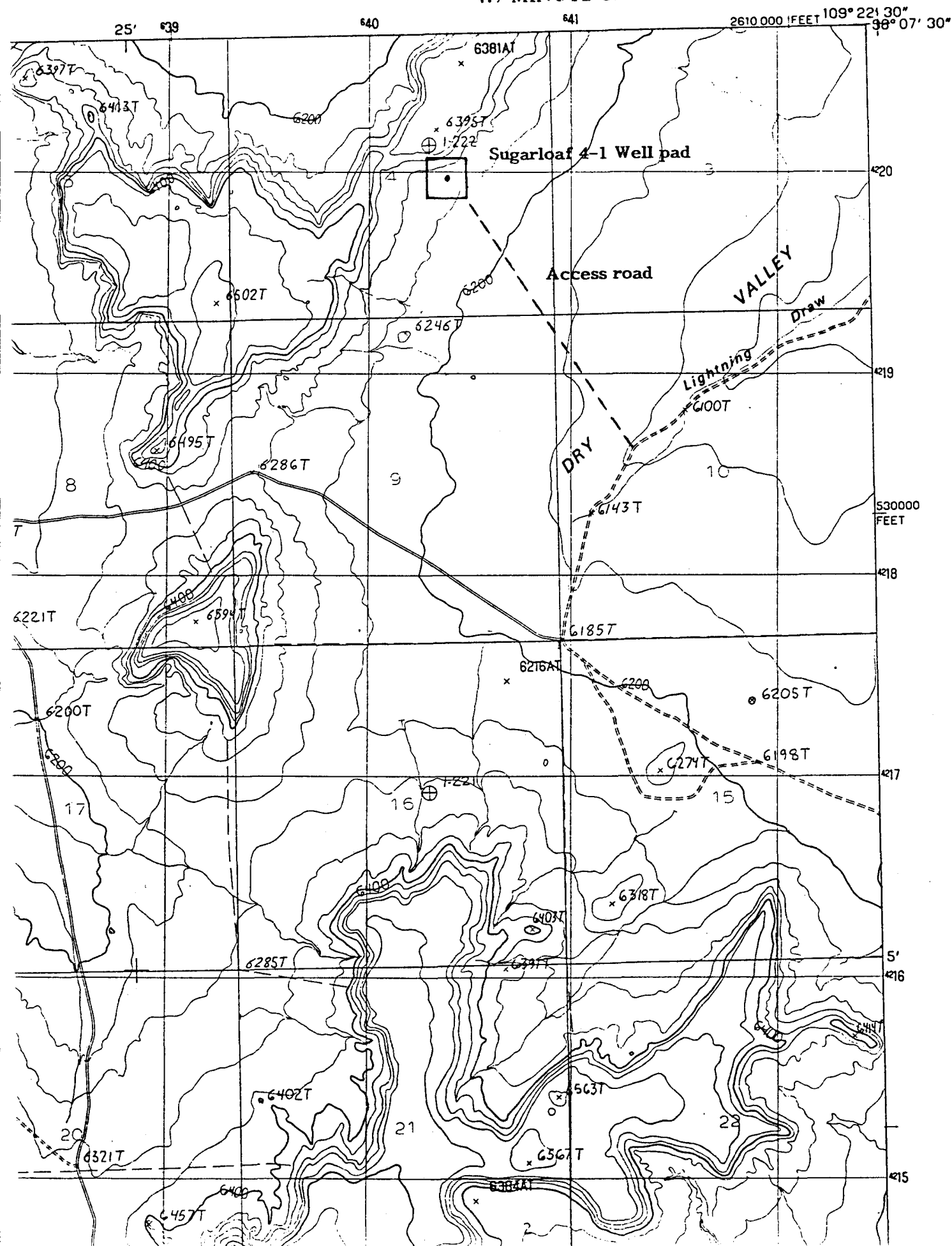
PHOTOGRAPHIC MAP QUADRANGLE
UTAH-SAN JUAN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

25' 639

640

641

2610 000 FEET 109° 22' 30" 38° 07' 30"



the sandstone exposures which border the valley.

Vegetation in this valley consists of mainly grasses with some shrubs sparsely distributed in certain locales. The shrubs consist of four-wing saltbush, sagebrush, with a few small juniper around the valley margins. Prickley pear cactus and annual mustards are also common.

The present land use pattern is almost entirely devoted to livestock grazing with cattle presently using the project area. The nearest known water source is unknown, but probably more than several miles away.

SURVEY PROCEDURES

The official file search was conducted with the BLM files located in the San Juan Resource Area Office on April 12, 1989. This search indicated that very few archaeological surveys have been conducted in the vicinity of the project except for several seismic line surveys conducted by La Plata and other companies. The nearest two previously recorded sites are in Sections 3 and 5 and neither of these (42SA14490 and 42SA18539) are within one mile of the proposed wellpad or access road.

The on-the-ground survey consisted of walking a zigzag transect down one side of the access road centerline and returning down the opposite side. A total width of 100 feet was covered with transect spacing averaging 50 feet or about 15 m. The proposed alignment was flagged by Marathon personnel during the archaeological survey. The well pad was surveyed after it was located by personnel of Clark-Reed Associates who were conducting the land survey for Marathon Oil. Parallel pedestrian transects spaced about 15 m apart were used to cover the 650 by 650 foot (10 acre) area surrounding the well center stake.

The access road and well pad together contain a total of 21.9 acres (8.9 ha) which were inventoried for cultural resources for this project. All acreage is administered by the Bureau of Land Management, San Juan Resource Area.

SURVEY RESULTS

No cultural resources were found during the survey for this proposed wellpad and access road and it is unlikely that buried cultural deposits are present.

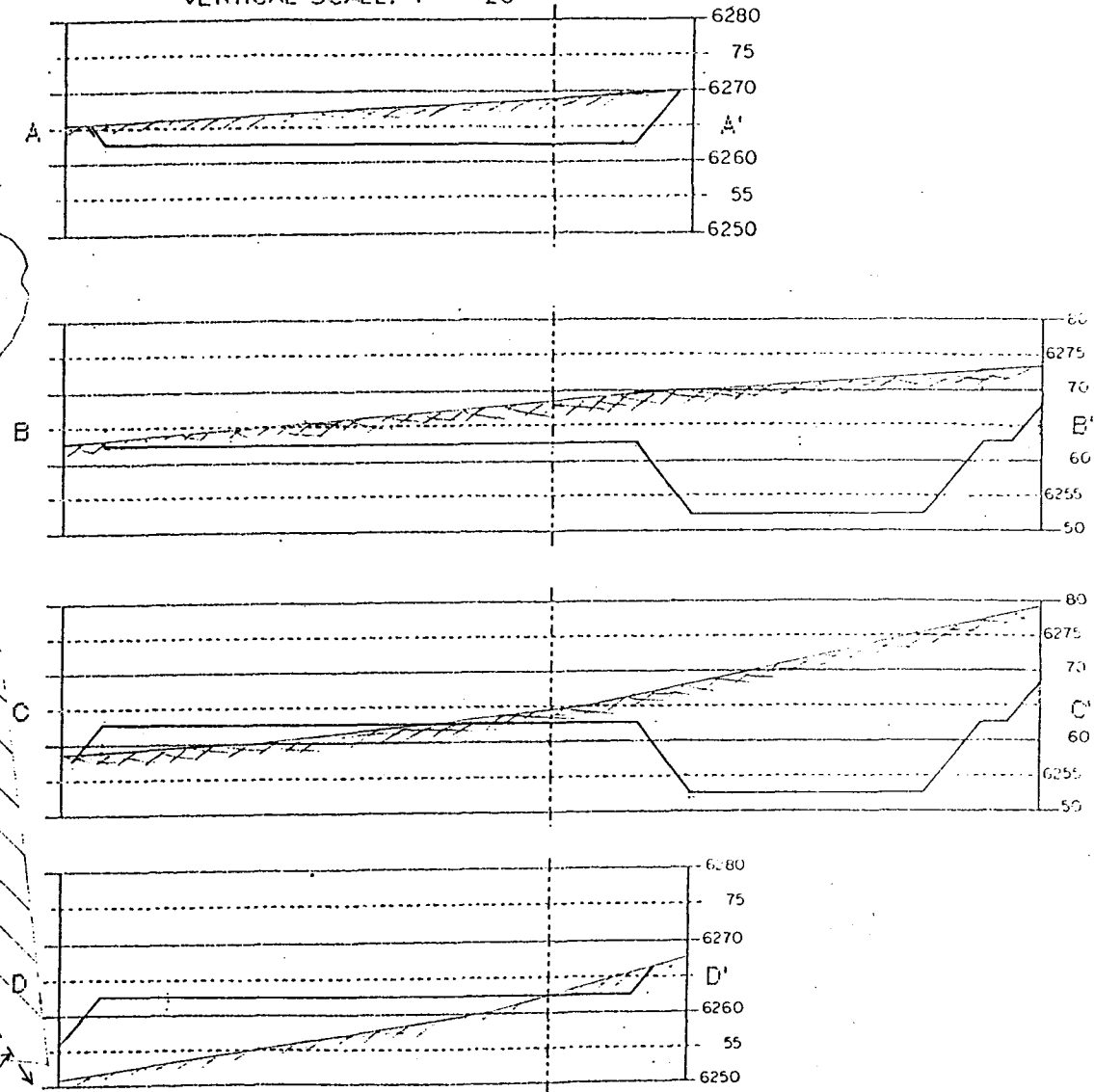
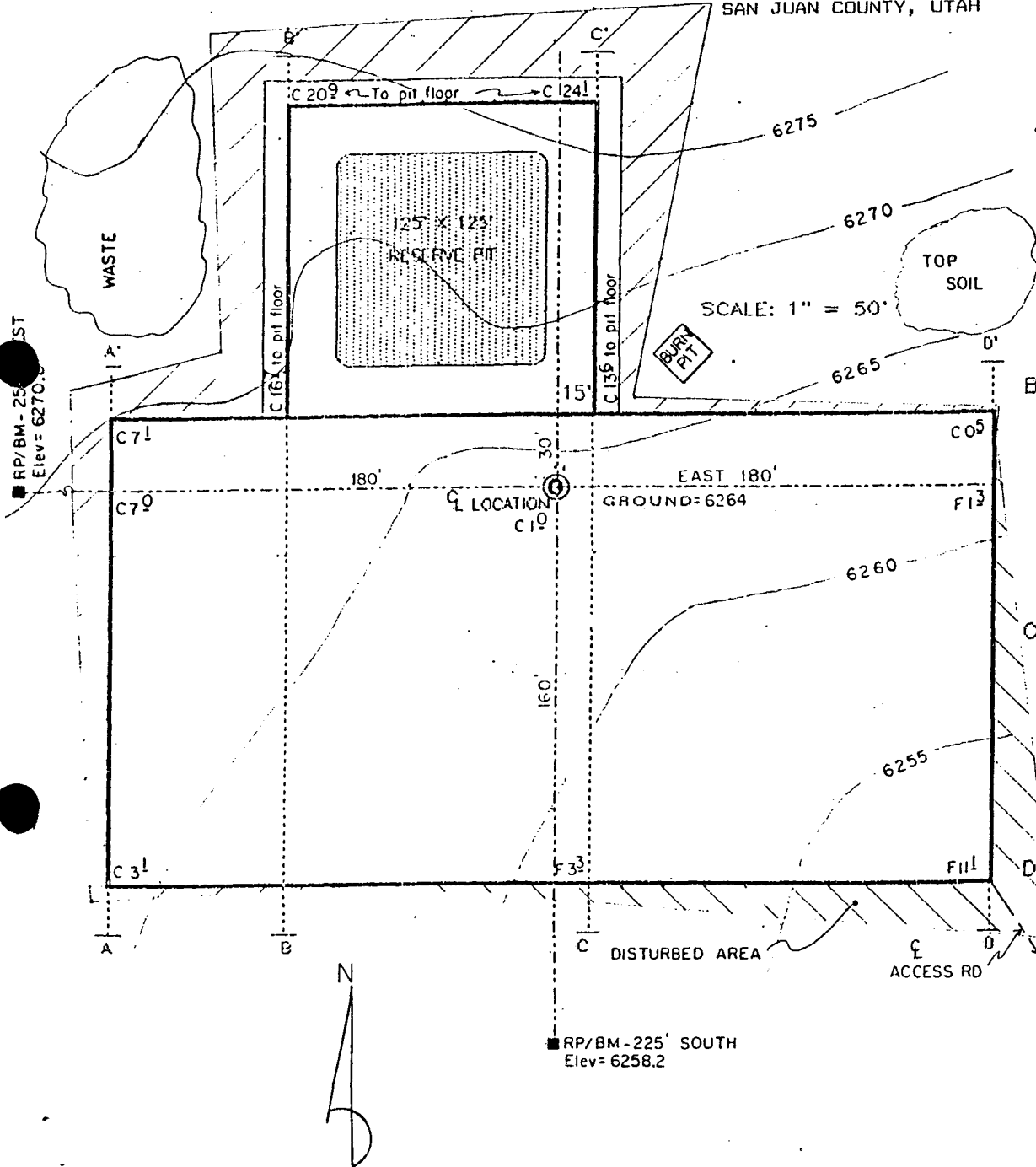
CONCLUSIONS AND RECOMMENDATIONS

The archaeological survey for Marathon Oil Company's Sugarloaf 4-1 access road and wellpad was conducted on April 13, 1989 by personnel of La Plata Archaeological Consultants. The project is located on lands administered by the Bureau of Land Management, San Juan Resource Area. No cultural resources were found and archaeological clearance is recommended for the project.

MARATHON OIL COMPANY

SUGAR LOAF NO. 4-1
2233 FSL - 1792 FEL
SEC. 4, T31S, R23E, SLM
SAN JUAN COUNTY, UTAH

CROSS SECTIONS:
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 20'



VOLUMES

TOTAL CUT - 12,825 y³
TOTAL FILL - 4,758 y³
TOP SOIL - 2,712 y³
WASTE - 5,355 y³
RESERVE PIT CAPACITY - 19,636 bbl

MARATHON OIL CO.
CODY, WYOMING

WELL SITE PLAN
SUGAR LOAF NO. 4-1
SEC. 4, T31S, R23E, SLM
SAN JUAN COUNTY, UTAH

CLARK-REED & ASSOC. APR 13 1989

DURANGO, COLORADO

89010

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

Paragraph #8: Primary Source - water collected in a privately owned pond.

Approximate Footages: 432' FNL & 2380' FWL of Section 1

The pond is located on the North end of the Monticello Airport (See Attached Map).
The pond is approximately five miles North of Monticello, Utah

Paragraph #12: The land on which the pond is located is owned by:

Mr. Grayson Redd
P. O. Box 157
Monticello, Utah 84535

Mr. Redd has been notified of this proposal

A Location Map is attached.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

Randal P. Meeker Regulatory Coordinator
Signature of Applicant*

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

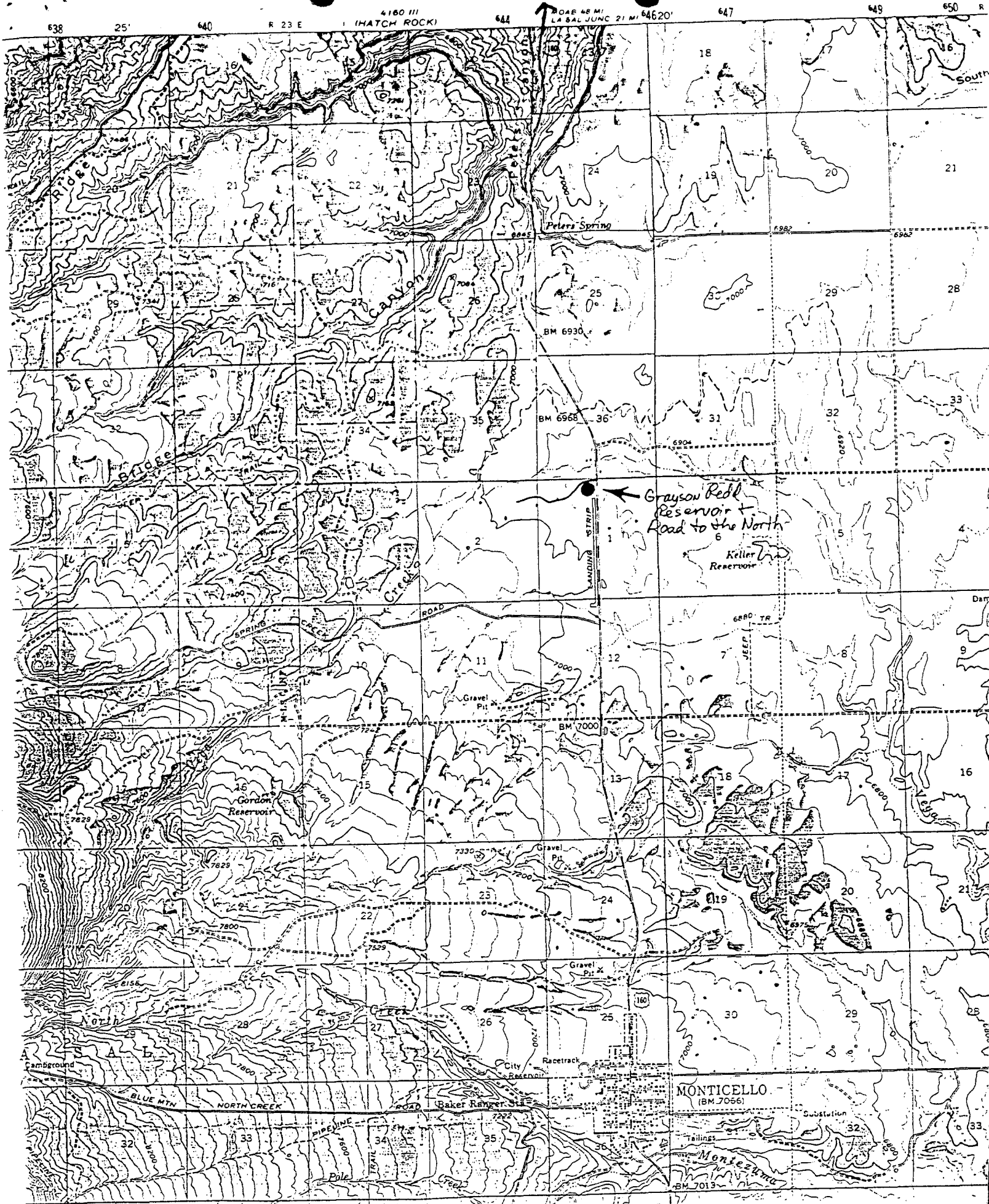
DECLARATION OF CITIZENSHIP

STATE OF UTAH, }
County of..... } ss

On the day of 19....., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:

To Well Location \approx 11 Miles



SAN JUAN COUNTY ROAD DEPARTMENT

Application for Right-of-Way Encroachment Permit

DATE: April 25, 1989

TO: Road Supervisor
San Juan County Road Department

Application is hereby made by: (1) Marathon Oil Company

Address (2) P. O. Box 2690, Cody, Wyoming 82414

Telephone Number: (307) 587-4961 for permission to do the following:

(3) To utilize San Juan County Roads and rights-of-way during the construction,
drilling, and maintenance of our proposed Sugarloaf #4-1 well located in
Section 4, T31S, R23E, San Juan County, Utah.

(4) Location: From Monticello, Utah travel approximately 17.5 miles North
on U.S. Highway #191, turn west onto County Road #141, travel 1.5 miles to
the access road. Turn North and travel approximately 1 mile to the location..
(See the attached map.)

City _____ County San Juan State Utah

or U. S. Highway No. 191 Milepost No. _____

in accordance with the attached plan. (5)

(6) Construction will begin on or about May 10, 19 89

and will be completed on or before October 10, 19 89

If the proposed installation requires Breaking of the pavement, give the following information:

a. Type of pavement: N/A

b. The opening to be made will be N/A feet long
by N/A feet wide and N/A feet deep.

c. A bond in the amount of \$ N/A has been posted with
_____ Telephone No. _____

to run of a term of three (3) years after completion of work to guarantee satisfactory performance.

(7) If this permit is granted, we agree to comply with all conditions, restriction, and regulations as contained in the "Regulations for the Control nad Protection of State Highway Rights-of-Way", approved by the Utah State Road Commission on October 8, 1962, and all revisions thereto or Regulations adopted by the San Juan County Commission.

(8) In approving this application and locations of utilities, and effort will be made to approve only locations that will not be effected in the event that San Juan County changes the roadway. But, in situations in which the utility has to be moved, this moving shall be done by the utility company or paid for by the company.

(9) For any and all applications requesting authority to Vibroseise, applicants shall:

- Provide map showing where vibroseising will take place.
- Agree to repair any damages or replace any property damaged.
- Take full responsibility or proper flagging and traffic control.

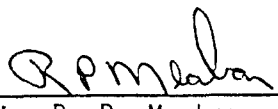
d. Agree that Vibroseising done in the area of dirt roads shall done on the dirt road rather than in the bar ditch to minimize damage.

e. Provide a schedule of the planned work and estimated dates of completion.

f. Attach written permission form all adjacent fee-title owners.

g. The San Juan County Commission has authorized the San Juan County Road Superintendent (or his Assignees) to issue permits.

(10) San Juan County can only grant permission to the extent that the County has the aurohrity to do so and the permission granted hereunder is limited to the interest of authority actually owned by San Juan County and no warranties of ownership or authority to grant permission is expressed or implied by the granting of this permit.


BY: R. P. Meabon
Regulatory Coordinator
TITLE

To be filled in by Road Supervisor.

(1) Permit should be granted _____

Permit should not be granted _____

(2) Additional requirements which should be imposed.

ROAD SUPERVISOR

INSTRUCTIONS

(1) *Application for this permit should be made in duplicate by whoever will actually do the work whether it be the owner or a contractor.

(2) Mailing address of applicant.

(3) State fully and completely the type or installaion, type of construction, width, thickness, drainage data, etc., where applicable. If pole line, give the following information: number of poles, total length of line, type of wire, character of service, vertical clearance over roadway, and voltage of power line.

(4) If pipe line or buried cable, give the follwing information: Type of service, size and length of line, depth of trench, kind of pipe, (sewer, gas, oil, water supply, etc.) or conduit, and if pipe is to be driven or if pavement will be broken. All fluid lines requires encasement with suitable material. The size and length of encasement shall be satisfactory to the State Department of Transportation, San Juan County Road Supervisor or his agent.

(5) Give distance from some geographical point such as intersecting highways, city, or coporate limits. Give city, county, and state or U. S. route number.

(6) Attach two (2) copies of a plan showing proposed location of structures with reference ot pavement and right-of-way lines. If installation crosses the highway, show cross section of present roadway and proposed installation.

(7) Give anticipated dates for beginning and for completion of proposed installation.

Note: A fee of five (5) dollars will be charged for all Right-of-Way Encroachments Permits, except those obtained for pole lines, and buried cable lines. This Permit fee, where applicable, should be submitted with the application. The costs of inspection are included in the Right-of-Way Encroachment Permit fee, except for pole lines, pipe lines, and buried cable lines which shall be billed for the inspection.

STATE ACTIONS

Mail to:
RDCC Coordinator
116 State Capitol
Salt Lake City, Utah 84114

-
1. ADMINISTERING STATE AGENCY
OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203
2. STATE APPLICATION IDENTIFIER NUMBER:
(assigned by State Clearinghouse)
-
3. APPROXIMATE DATE PROJECT WILL START:
Upon approval
-
4. AREAWIDE CLEARING HOUSE(s) RECEIVING STATE ACTIONS:
(to be sent out by agency in block 1)
Southeastern Utah Association of Local Governments
-
5. TYPE OF ACTION: ☐ Lease ☒ Permit ☐ License ☐ Land Aquisition
☐ Land Sale ☐ Land Exchange ☐ Other_____
-
6. TITLE OF PROPOSED ACTION:
Application for Permit to Drill
-
7. DESCRIPTION:
Marathon Oil Company proposes to drill a wildcat well, the Sugarloaf #4-1, on federal lease number U-60520 in San Juan County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U.S. Bureau of Land Management is the primary administrative agency in this case and must issue approval to drill jointly with DOGM before operations can commence.
-
8. LAND AFFECTED (site location map required) (indicate county)
NW/4, SE/4, Section 4, Township 31 South, Range 23 East, San Juan County, Utah
-
9. HAS THE LOCAL GOVERNMENT(s) BEEN CONTACTED?
Unknown
-
10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:
Degree of impact is based on the discovery of oil or gas in commercial quantities.
-
11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:
Glen Goodwin, Monticello, 587-2710
-
12. FOR FURTHER INFORMATION, CONTACT: 13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL
John Baza
PHONE: 538-5340
DATE: 5/08/89
Petroleum Engineer
-

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with State requirements)
At surface

1792' FEL & 2233' FSL NW1/4 SE1/4
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 20 miles Northwest of Monticello, Utah

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drilg. unit line, if any)

2233'

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

16. NO. OF ACRES IN LEASE

2597.20

19. PROPOSED DEPTH

5500'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6264' Ungraded GL

22. APPROX. DATE WORK WILL START*

ASAP

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	1250'	340 Sacks to Surface
7-7/8"	5-1/2"	15.5#	5500'	Suff. to Surface Casing Shoe

BLM-Orig & 3-cc:SUDOGM-2, WRF, FMK, GBP, Drilling-3, Title & Cont. (Hous.)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

RPM

TITLE

Regulatory Coordinator

DATE May 1, 1989

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

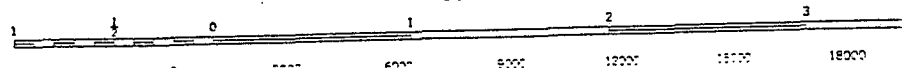
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



and published by the Geological Survey

USC&GS

photographs by multicolor methods



CONFIDENTIAL

OPERATOR Marathon Oil Company (N34907) DATE 5-5-89
WELL NAME Sugarloaf 4-1
SEC NWSE 4 T 31S R 23E COUNTY San Juan

43-037-31464
API NUMBER

Federal
TYPE OF LEASE

CHECK OFF:

☒ PLAT

☒ BOND

☒ NEAREST WELL

☒ LEASE

☒ FIELD

☒ POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other well within 920' (no other well in sec. 4)
Need water permit
RDCC 5-8-89 - Process 5-22-89
Archaeological Survey 4-15-89
Exception to location requested on cover letter.

APPROVAL LETTER:

SPACING: ☐ R615-2-3 N/A ☐ R615-3-2
UNIT
☐ N/A ☒ R615-3-3
CAUSE NO. & DATE

STIPULATIONS:

1. Water permit

05/05/89
NO
EXPIRED
PERIOD
CONFIDENTIAL



Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

May 25, 1989

Marathon Oil Company
P. O. Box 2690
Cody, Wyoming 82414

Gentlemen:

Re: Sugarloaf 4-1 - NW SE Sec. 4, T. 31S, R. 23E - San Juan County, Utah
2233' FSL, 1792' FEL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-3, Oil and Gas Conservation General Rules, subject to the following stipulation:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
3. Submittal of the Report of Water Encountered During Drilling, Form 7.
4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318.
5. Compliance with the requirements of Rule R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31464.

Sincerely,



R. J. Eirth
Associate Director, Oil & Gas

lr
Enclosures
cc: Branch of Fluid Minerals
D. R. Nielson
WE14/1-2



Norman H. Bangerter
Governor
Max J. Evans
Director

State of Utah

Division of State History
(Utah State Historical Society)
Department of Community and Economic Development

300 Rio Grande
Salt Lake City, Utah 84101-1182
801-533-5755

May 24, 1989

well file

RECEIVED
MAY 26 1989

DEPARTMENT OF
OIL, GAS & MINING

Mr. John Baza
Division of Oil, Gas, and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Application for Permit to Drill, Sugarloaf #4-1, Lease No. U-60520, San
Juan County, Utah UT89-509-030

In Reply Please Refer to Case No. M502

Dear Mr. Baza:

The Utah State Historic Preservation Office received the cultural resource report for this well location on April 24, 1989. The archaeological consultant found no cultural resources as a result of his survey of the well location and access road. Therefore, no known cultural resources will be impacted by this project.

This information is provided on request to assist with cultural resource compliance activities. If you have questions or need additional assistance, please contact us at (801) 533-7039.

Sincerely,

Diana Christensen
Regulation Assistance Coordinator

DC:7019V/M502



DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

Norman H. Bangertter

Governor

Dee C. Hansen

Executive Director

Robert L. Morgan

State Engineer

1636 West North Temple, Suite 220

Salt Lake City, Utah 84116-3156

801-538-7240

June 2, 1989

Marathon Oil Company
P.O. Box 2690
Cody, WY 82414

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 09-1639 (T63906)

Enclosed is a copy of approved Temporary Application Number 09-1639 (T63906). This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire June 2, 1990, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it, is with the Area Engineer, Mark Page. The telephone number is (801)637-1303.

Sincerely,

Robert L. Morgan, P.E.
State Engineer

RLM:rc

Encl.: Copy of Approved Temporary Application

WATER RIGHTS DIVISION OF
SALT LAKE COUNTY
OIL, GAS & MINING

APPLICATION TO APPROPRIATE WATER
STATE OF UTAH

NOTE: The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for uses indicated by (X) in the proper box or boxes, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

1. Irrigation ☐ Domestic ☐ Stockwatering ☐ Municipal ☐ Power ☐ Mining ☐ Other Uses ☒
2. The name of the applicant is Marathon Oil Company
3. The Post Office address of the applicant is P. O. Box 2690, Cody, Wyoming 82414
4. The quantity of water to be appropriated _____ second-feet and/or 3.5 acre-feet
5. The water is to be used for Oil Well Drilling from May 10, 1989 to May 10, 1990
(Major Purpose) (Month) (Day) (Month) (Day)
other use period _____ from _____ to _____
(Minor Purpose) (Month) (Day) (Month) (Day)
and stored each year (if stored) from _____ to _____
(Month) (Day) (Month) (Day)

6. The drainage area to which the direct source of supply belongs is _____
(Leave Blank)

7. The direct source of supply is* A pond located on the property of Grayson Redd, NE1/4 NW1/4 of Section 1, T33S, R23E, water being collected from flow from Gordon's Reservoir.
(Name of stream or other source)
which is tributary to _____, tributary to _____

*Note.—Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in San Juan County, situated at a point* NE1/4 NW1/4 of Section 1, T33S, R23E. A pond located on the property of Grayson Redd, the pond is located on the North side of the Monticello Airport.

* Approximate Footages * (432' FMI & 2380' FMI of Section 1) NW1/4

*Note.—The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of Trucks running to the pond and pumping water from the pond. The trucks will then transport the water to the well site.
10. If water is to be stored, give capacity of reservoir in acre-feet _____ height of dam _____
area inundated in acres _____ legal subdivision of area inundated _____

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:

_____ Total _____ Acres

12. Is the land owned by the applicant? Yes _____ No X If "No," explain on page 2.
13. Is this water to be used supplementally with other water rights? Yes _____ No X
If "yes," identify other water rights on page 2.
14. If application is for power purposes, describe type of plant, size and rated capacity. _____
15. If application is for mining, the water will be used in _____ Mining District at the _____ mine, where the following ores are mined _____
16. If application is for stockwatering purposes, number and kind of stock watered _____
17. If application is for domestic purposes, number of persons _____, or families _____
18. If application is for municipal purposes, name of municipality _____
19. If application is for other uses, include general description of proposed uses Oil Well Drilling

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. NW1/4 SE1/4 Section 4, T31S, R23E San Juan County, Utah.
Exploration wellsite for the Sugarloaf #4-1 well 43-037-31464

21. The use of water as set forth in this application will consume 3.5 second-feet and/or acre-feet of water and 0 second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: _____

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

Paragraph #8: Primary Source - water collected in a privately owned pond.

Approximate Footages: 432' FNL & 2380' FWL of Section 1

The pond is located on the North end of the Monticello Airport (See Attached Map).
The pond is approximately five miles North of Monticello, Utah

Paragraph #12: The land on which the pond is located is owned by:

Mr. Grayson Redd
P. O. Box 157
Monticello, Utah 84535

Mr. Redd has been notified of this proposal

A Location Map is attached.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

Randal P. Mealen Regulatory Coordinator
Signature of Applicant*

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH, }
County of..... } ss

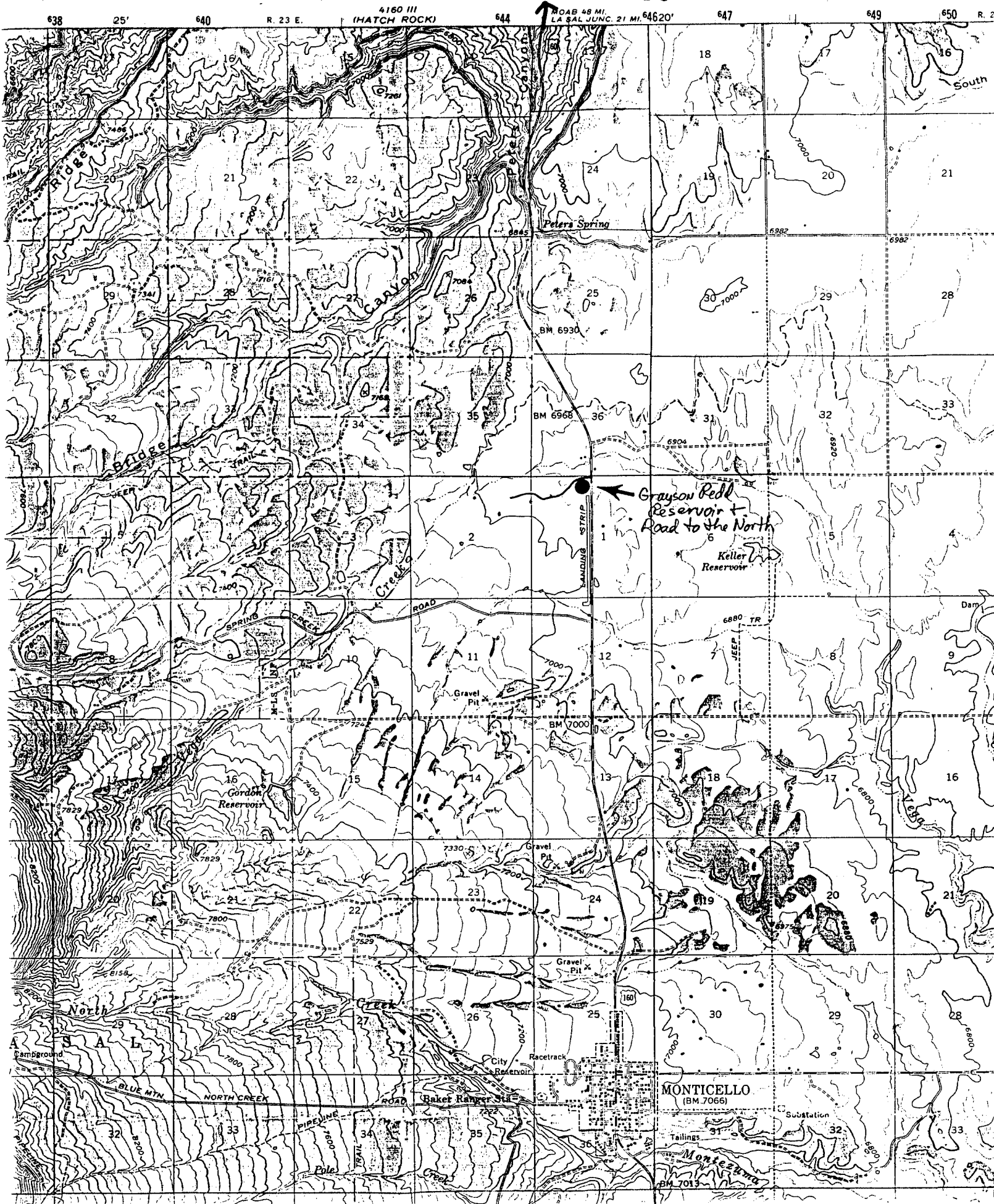
On the day of, 19....., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:

(SEAL)

Notary Public

To Well Location \approx 11 Miles



STATE ENGINEER'S ENDORSEMENT

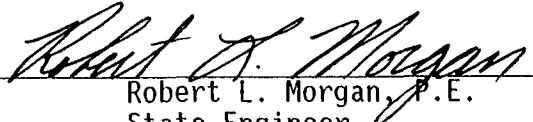
WATER RIGHT NUMBER: 09 - 1639

APPLICATION NO. T63906

1. April 28, 1989 Application received.
 2. May 15, 1989 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated June 2, 1989, subject to prior rights and this application will expire on June 2, 1990.


Robert L. Morgan, P.E.
State Engineer



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

June 2, 1989

RECEIVED
JUN 07 1989

DIVISION OF
OIL, GAS & MINING

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center Suite 350
Salt Lake City, Utah 84180-1203

43-037-31464

RE: "Confidential Status" - Sugarloaf #4-1, Section 4, T31S, R23E,
San Juan County, Utah Lease #U-60520

Gentlemen:

Presently Marathon Oil Company is in the process of obtaining the necessary permits to drill the above referenced well. At this time, Marathon requests that all information pertaining to this well, especially downhole information, be kept in a "Confidential Status".

Your cooperation in fulfilling this request is greatly appreciated. If you have any questions feel free to contact our office.

Sincerely,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'R P Meabon'.

R. P. Meabon
Regulatory Coordinator
Rocky Mountain Region

RPM/FMK/rrm

cc: Bureau of Land Management
P. O. Box 970
82 E. Dogwood
Moab, Utah 84532

CONFIDENTIAL



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

June 5, 1989

RECEIVED
JUN 07 1989

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

**DIVISION OF
OIL, GAS & MINING**

RE: Evidence of Approved Water Supply for the Drilling of Sugarloaf
#4-1, NWSE Sec. 4, T31S, R23E, San Juan County, Utah.

Gentlemen:

As stipulated in the approval letter, dated May 25, 1989, granting Marathon Oil Company approval to drill the above referenced well, please find a copy of the executed water permit enclosed.

That copy will serve as evidence of an approved supply of water. If additional information is needed feel free to contact Marathon's office in Cody, Wyoming.

Thank you for your continued cooperation.

Sincerely,

MARATHON OIL COMPANY

R. P. Meabon
Regulatory Coordinator
Rocky Mountain Region

RPM/FMK/rrm

Enclosure:

cc: Bureau of Land Management
P. O. Box 970
82 E. Dogwood
Moab, Utah 84532

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL
OIL WELL ☒ GAS WELL ☐ OTHER ☐

SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface

1792' FEL & 2233' FSL NW1/4 SE1/4
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 20 miles Northwest of Monticello, Utah

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

2233'

16. NO. OF ACRES IN LEASE

2597.20

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

19. PROPOSED DEPTH

5500'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6264' Ungraded GL

22. APPROX. DATE WORK WILL START*

ASAP

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	1250'	340 Sacks to Surface

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

RPM Leaven

TITLE

Regulatory Coordinator

DATE May 1, 1989

(This space for Federal or State office use)

PERMIT NO.

43-037-31464

APPROVAL DATE

ACTING

DISTRICT MANAGER

JUN 7

APPROVED BY

/S/ WILLIAM C. STRINGER

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

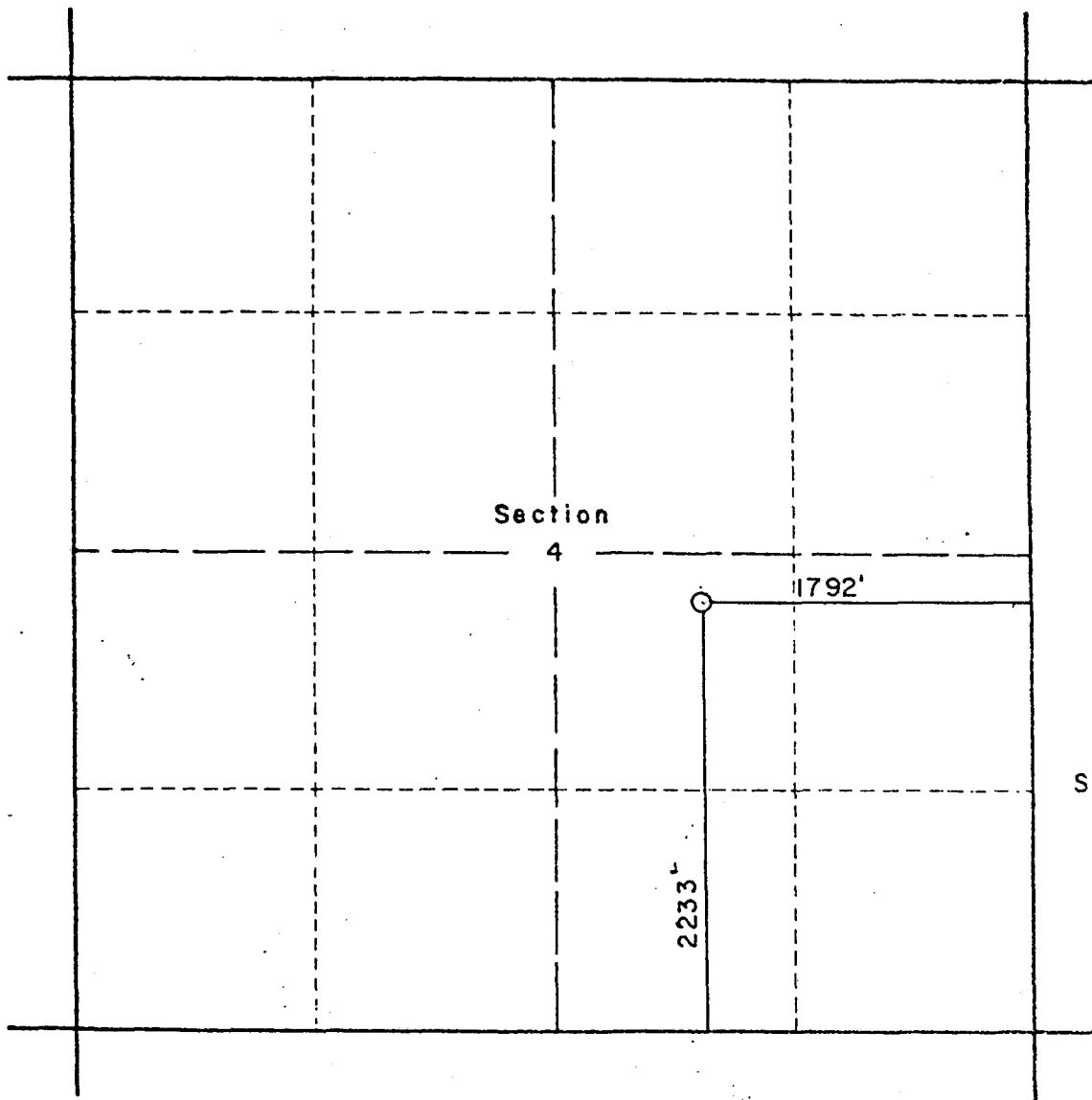
CONDITIONS OF APPROVAL ATTACHED

FLARING OR VENTING OF
GAS IS SUBJECT TO NTL 4-A

Dated 1/1/80

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



Scale: 1" = 1000'

WELL LOCATION: MARATHON - SUGAR LOAF NO. 4-1

Located 2233 feet North of the South line and 1792 feet West of the East line of Section 4
 Township 31 South, Range 23 East, Salt Lake Meridian

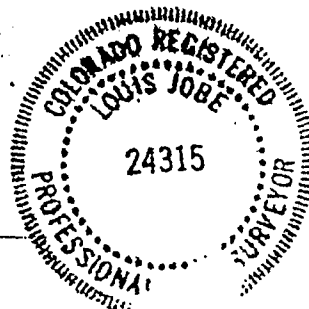
Existing ground elevation determined at 6264 feet based on USC&G Datum of 6002 (D21-1983)

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief

Louis Jobe

Louis Jobe

Registered Land Surveyor



MARATHON OIL CO.
 CODY, WYOMING

WELL LOCATION PLAT
 Sugar Loaf No. 4-1
 Sec. 4, T31S, R 23E, SLM
 San Juan County, Utah

CLARK - REED & ASSOC.
 Durango, Colorado

DATE: April 13, 1989
 FILE NO 89010

SELF CERTIFICATION STATEMENT

Be advised that Marathon Oil Company is considered to be the operator of Well No. 4-1, NWSE, 1/4 1/4, Section 4, T31S, R23E, B&M Lease U-60520, San Juan County, Utah, and is responsible under the terms and conditions of the lease for the operations conducted on the leased land.

Bond coverage for this well is provided by Bond No. 2279791 (Principal \$150,000.00) via surety consent as provided for in 43 CFR 3104.2.

Marathon Oil Company
Well No. Sugarloaf 4-1
NWSE Sec. 4, T. 31 S., R. 23 E.
San Juan County, Utah
Lease U-60520

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Marathon Oil Company is considered to be the operator of the above well, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by BLM Bond No. ES0132. (Principal - Marathon Oil Company) as provided for in 43 CFR 3104.3.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

A. DRILLING PROGRAM

All lease operations will be conducted in full compliance with applicable regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, Onshore Oil and Gas Order No. 2 and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions and the approved plan will be made available to the field representative to insure compliance.

1. If unconsolidated rock is encountered, conductor shall be set ten (10) feet unto underlying bedrock with cement circulated to surface.
2. Surface casing will be set 50 feet into the Chinle Formation regardless of the depth the Chinle is encountered.

Conditions of Approval
for Surface Use of the
Sugar Loaf 4-1, U-60520

1. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.
2. On Item 10 of the APD, Restoration of Surface, add to the seed mixture as follows:
1 lb/ac sagebrush (per onsite)

B. Additional Requirements According To Onshore Oil and Gas Order No. 2

- 3000 psi BOP & BOPE:

Drilling spool, or blowout preventer with 2 side outlets (choke side shall be a 3-inch minimum diameter, kill side shall be at least 2-inch diameter),

Kill line (2 inch minimum),

A minimum of 2 choke line valves (3-inch minimum),

3 inch diameter choke line,

2 kill line valves, one of which shall be a check valve (2 inch minimum),

2 chokes (refer to diagram in Onshore Order Number 2.),

Pressure gauge on choke manifold,

Safety valve and subs to fit all drill strings in use,

All BOPE connections subjected to well pressure shall be flanged, welded, or clamped,

Fill-up line above the uppermost preventer,

- If repair or replacement of the BOPE is required after testing, this work shall be performed prior to drilling out the casing shoe, and
- When the BOPE cannot function to secure the hole, the hole shall be secured using cement, retrievable packer or bridge plug packer, bridge plug or other acceptable approved methods to assure safe well conditions.

- Choke Manifold Equipment:

All choke lines shall be straight lines unless turns use tee blocks or are targeted with running tees, and shall be anchored to prevent whip and reduce vibration.

All valves (except chokes) in the kill line, choke manifold and choke line shall be a type that does not restrict the flow (full opening) and that allows a straight through flow.

Pressure gauges in the well control system shall be a type designed for drilling fluid service.

- 3000 psi system - Accumulator Equipment:

Accumulator shall have sufficient capacity to open the hydraulically controlled choke line valve (if so equipped), close all rams plus the annual preventer, and retain a minimum of 200 psi above precharge on the closing manifold without the use of the closing unit pumps. This is a minimum requirement. The fluid reservoir capacity shall be double the accumulator capacity and fluid level maintained at manufacturer's recommendations. The 3M system shall have 2 independent power sources to close the preventers. Nitrogen bottles (3 minimum) may be 1 of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

Accumulator precharge pressure test: This test shall be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure shall be corrected if the measure precharge pressure is found to be above or below the maximum limit specified within Onshore Order Number 2.

Power for the closing unit pumps shall be available to the unit at all times so that the pumps shall automatically start when the closing unit manifold pressure has decreased to a pre-set level.

Each BOP closing unit shall be equipped with sufficient number and sizes of pumps so that, with the accumulator system isolated from service, the pumps shall be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and obtain a minimum of 200 psi. above specified accumulator precharge pressure.

A manual locking device (i.e., hand wheels) or automatic locking devices shall be installed on all systems of 2M or greater. A valve shall be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls for all 3M or greater systems shall be capable of closing all preventers.

- BOP Testing:

Pressure tests on ram type preventers shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed off of pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test of BOP stack.

Annular BOP pressure tests shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above tests shall be performed:

- **When initially installed;
- **Whenever any seal subject to test pressure is broken;
- **Following related repairs; and
- **At 30 day intervals.

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s), the check valve shall be held open or the ball removed.

Annular preventers shall be functionally operated at least weekly. Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

Pressure tests shall apply to all related well control equipment.

All of the above described tests and/or drills shall be recorded in the drilling log.

- Casing and Cementing:

All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

All casing, except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.

The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing.

All of the above described tests shall be recorded in the drilling log.

All indications of usable water shall be reported to the authorized officer prior to running the next string of casing or before plugging orders are requested, whichever occurs first.

Surface casing shall have centralizers on the bottom three joints.

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

- Mud Program Requirements:

The characteristics, use and testing of drilling mud and the implementation of related drilling procedures shall be designed to prevent the loss of well control. Sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring well control.

-Record slow pump speed on daily drilling report after mudding up.

-Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume.

-A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

-All flare systems shall be designed to gather and burn all gas. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where non-combustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare.

- Drill Stem Testing Requirements:

Initial opening of drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the authorized officer. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the authorized officer. Closed chamber DSTs may be accomplished day or night.

-A DST that flows to the surface with evidence of hydrocarbons shall be either reversed out of the testing string under controlled surface conditions, or displaced into the formation prior to pulling the test tool. This would involve providing some means for reverse circulation.

-Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

-All engines within 100 feet of the wellbore that are required to "run" during the test shall have spark arresters or water cooled exhausts.

- Special Drilling Operations:

In addition to the equipment already specified elsewhere in Onshore Order No. 2 , the following equipment shall be in place and operational during air/gas drilling:

-Properly lubricated and maintained rotating head;

-Spark arresters on engines or water cooled exhaust;

-Blooie line discharge 100 feet from well bore and securely anchored;

- Straight run on blooie line unless otherwise approved;
- Deduster equipment;
- All cuttings and circulating medium shall be directed into a reserve or blooie pit;
- Float valve above bit;
- Automatic igniter or continuous pilot light on the blooie line;
- Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the well bore;
- Mud circulating equipment, water, and mud materials (does not have to be premixed) sufficient to maintain the capacity of the hole and circulating tanks or pits.

NOTIFICATIONS

Notify the San Juan Resource Area, at (801) 587-2141 for the following:

2 days prior to commencement of dirt work, construction or reclamation;

1 day prior to spudding;

1 day prior to running and cementing surface casing.

Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:

No well abandonment operations will be commenced without the prior approval of the District Manager. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed.

Dale Manchester, Petroleum Engineer Office Phone: (801) 259-6111

Home Phone: (801) 259-6239

Eric Jones, Petroleum Engineer Office Phone: (801) 259-6111

Home Phone: (801) 259-2214

If unable to reach the above individuals including weekends, holidays, or after hours please call the following:

Lynn Jackson, Chief, Branch of Fluid Minerals

Office Phone: (801) 259-6111

Home Phone: (801) 259-7990

24 HOURS ADVANCE NOTICE IS REQUIRED FOR ALL ABANDONMENTS.

DIVISION OF OIL, GAS AND MINING

API NO. 43-037-31464

SPUDDING INFORMATION

NAME OF COMPANY: MARATHON OIL COMPANY

WELL NAME: SUGAR LOAF 4-1

SECTION NWSE 4 TOWNSHIP 31S RANGE 23E COUNTY SAN JUAN

DRILLING CONTRACTOR AZTEC

RIG # 124

SPUDDED: DATE 7/9/89

TIME 12:45 a.m.

How ROTARY

CONFIDENTIAL

DRILLING WILL COMMENCE HAD TO PHONE COMPANY FOR REPORT

REPORTED BY FRANK KRUGH

TELEPHONE 307-587-4961

DATE 7/13/89 SIGNED TAS

RECEIVED
JUL 17 1989

OPERATOR Marathon Oil Company
ADDRESS P O Box 2690
Cody, WY 82414

OPERATOR ACCT. NO. 113490

CONFIDENTIAL

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	DIVISION OF OIL, GAS & MINING	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
						QQ	SC	TP	RG	COUNTY		
A	99999	10996	43-037-31464		Sugar Loaf 4-1	NWSE	4	315	23E	San Juan	7-9-89	7-9-89

WELL 1 COMMENTS: Federal Lease Proposed Zone - DSCR
Field-Wildcat (Assign entity 10996 on 7-20-89) JCR
Not in a Unit

--	--	--	--	--	--	--	--	--	--	--	--	--

WELL 2 COMMENTS:

--	--	--	--	--	--	--	--	--	--	--	--	--

WELL 3 COMMENTS:

--	--	--	--	--	--	--	--	--	--	--	--	--

WELL 4 COMMENTS:

--	--	--	--	--	--	--	--	--	--	--	--	--

WELL 5 COMMENTS:

- ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
 - B - Add new well to existing entity (group or unit well)
 - C - Re-assign well from one existing entity to another existing entity
 - D - Re-assign well from one existing entity to a new entity
 - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

J. L. Simms
Signature J. L. Simms
Prod. Acctg. Supv. 7/12/89
Title Date
Phone No. (307) 587-4961

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. ☐ OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with State requirements.*
See also space 17 below.)
At surface

1792' FEL & 2233' FSL

RECEIVED
JUL 26 1989

DIVISION OF
OIL, GAS & MINING

14. PERMIT NO.
43-037-31464

15. ELEVATIONS (Show whether DP, FM or FSL)

5. LEASE DESIGNATION AND SERIAL NO
U-60520
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Sugarloaf
9. WELL NO.
4-1
10. FIELD AND POOL, OR WILDCAT
Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 4, T31S, R23E
12. COUNTY OR PARISH
San Juan
13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)

PCLL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF
FRACTURE TREATMENT
SHOOTING OR ACIDIZING
(Other) Spud

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

CONFIDENTIAL

The above referenced well was spudded by Aztec Rig #124 at 12:45 a.m. on July 9, 1989. This was verbally reported to the BLM and State of Utah. The temporary water permit number is T-63906.

Moab BLM-Orig & 3-cc: (SUDOGGM-2, WRF, FMK, Title & Contract (Houston))

18. I hereby certify that the foregoing is true and correct

SIGNED

RPM

TITLE Regulatory Coordinator

DATE July 12, 1989

(This space for Federal or State office use)

NOTED

Branch of Fluid Minerals
Moab District

JUL 19 1989

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

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AUG 03 1989

DIVISION OF
OIL, GAS & MINING

CORE ANALYSIS RESULTS

for

Marathon Oil Company

Sugar Loaf No. 4-1 Well
Wildcat

San Juan County, Utah
File Number: 57121-8346

CONFIDENTIAL

CORE LABORATORIES

Company : Marathon Oil Company
 Well : Sugar Loaf No. 4-1
 Location : NW SE Sec. 4 T31S R23E
 Co,State : San Juan, Utah

Field : Wildcat
 Formation : Paradox
 Coring Fluid : Water Base Mud
 Elevation :

File No.: 57121-8346
 Date : 28-Jul-1989
 API No. :
 Analysts: DS MW JS

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	DESCRIPTION
Core No.1 5486.0-5522.0 Cut 36.0' Rec. 36.0'		
	5486.0- 92.0	Dol -- No Analysis -- Client Request
	5492.0- 22.0	Dol Sh -- No Analysis -- Client Request
	5522.0- 21.0	Drilled Interval
Core No.2 5621.0-5681.0 Cut 60.0' Rec. 0.0'		
	5621.0- 81.0	Core Loss

CORE LAB SPECTRAL GAMMA-RAY PLOT

Marathon Oil Company

Sugar Loaf No. 4-1 Well

Wildcat

San Juan County, Utah

Paradox Formation

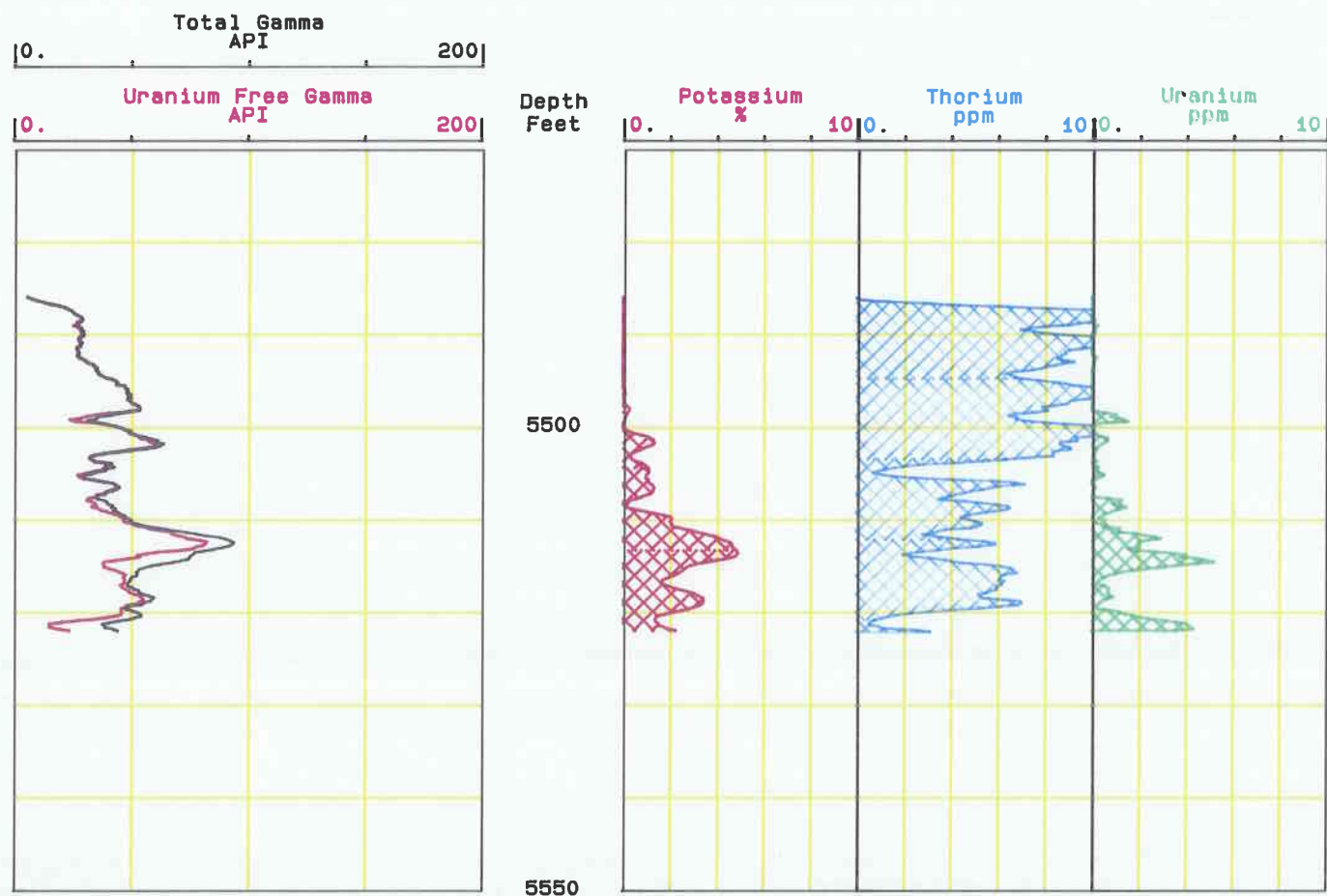
5486.0-5522.0 feet

Core Laboratories

22-Jul-1989

Vertical Scale

5.00 in = 100.0 ft



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Budget: Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or
Use "APPLICATION FOR PERMIT—" for

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5. LEASE DESIGNATION AND SERIAL NO.

U-60520

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Confidential

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Sugarloaf

9. WELL NO.

4-1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 4, T31S, R23E

12. COUNTY OR PARISH 13. STATE

San Juan

Utah

1. OIL ☐ GAS ☐ OTHER ☐ Plugged & Abandoned

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)

At surface

1792' FEL & 2233' FSL

14. PERMIT NO.

43-037-31464

15. ELEVATIONS (Show whether DT, RT, GR, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

☐

PULL OR ALTER CASING

☐

FRACTURE TREAT

☐

MULTIPLE COMPLETE

☐

SHOOT OR ACIDIZE

☐

ABANDON*

☒

REPAIR WELL

☐

CHANGE PLANE

☐

(Other) See Below

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

☐

REPAIRING WELL

☐

FRACTURE TREATMENT

☐

ALTERING CASING

☐

SHOOTING OR ACIDIZING

☐

ABANDONMENT*

☐

(Other)

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)

The following procedure to plug the above referenced well was discussed and agreed upon
by Lynn Jackson and Mac Hansen on July 25, 1989.

PLUG PLACEMENT

CONFIDENTIAL

5500'-5300'
5200'-5000'
3100'-3000'
1393'-1193'
retainer set at \pm 1250'
50'-Surface
Install Dry Hole Marker

OIL AND GAS	
DRN	
1-JAB	
PTS	LS
2-TAS	
MICROFILM	
FILE	

*NOTE: Cement volumes will be determined during the actual work.

BLM-Orig & 3--cc: (SUDOGM-2, WRF, FMK, Drilling, Title & Contract (Houston))

18. I hereby certify that the foregoing is true and correct

SIGNED

BPM

TITLE Regulatory Coordinator

DATE July 25, 1989

(This space for Federal or State office use)

APPROVED BY

Denise

TITLE

District Mgr.

DATE

8/14/89

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: *8-28-89*

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make in any Department or Agency of the
United States any false, fictitious or fraudulent statements or representations as to any matter within the jurisdiction of the

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(See instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other ☐

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface
1792' FEL & 2233' FSL
At top prod. interval reported below
At total depth

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SEP 13 1989

CONFIDENTIAL

14. PERMIT NO. 43-037-31464 DATE ISSUED 5/25/89

15. DATE SPUNDED 7/9/89 16. DATE T.D. REACHED 7/23/89 17. DATE COMPL. (Ready to prod.) P&A'd 7/25/89 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6278' KB 19. ELEV. CASINGHEAD 6264' GL

20. TOTAL DEPTH, MD & TVD 5730' 21. PLUG, BACK T.D., MD & TVD Surface 22. IF MULTIPLE COMPL., HOW MANY* N/A 23. INTERVALS DRILLED BY 0 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Plugged & Abandoned

25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN DLL-GR-MSFL-CAL, LDT-CNL-NGT, DIP SS 27. WAS WELL CORED Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	36#	1294'	12-1/4"	540 sacks to Surface	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
---	---	---	---	---

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
---	---	---

31. PERFORATION RECORD (Interval, size and number)

Plug Record:
Plug #1 - 5512'-5293' 200 sacks
Plug #2 - 5200'-4993' 855 sacks
Plug #3 - 3114'-2996' 50 sacks
Set retainer at 1241' w/100 sacks below & 25 sacks above

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
---	---

33. Plug #4 - 50' to Surface with 25 sacks PRODUCTION

DATE FIRST PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Plug & Abandoned WELL STATUS (Producing or shut-in)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY

35. LIST OF ATTACHMENTS
Dist: BLM-Orig & 2-cc: SUDOGM-2, WRF, FMK, GBP, TKS, Title & Contract (Houston)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED R P M. [Signature] TITLE Regulatory Coordinator DATE September 11, 1989

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			<p style="text-align: center;">CORES:</p> <p>Core #1 - 5486' - 5522' recovered 36'</p> <p>Core #2 - 5622' - 5682' recovered 0'</p>

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
1-TAS	
MICROFILM	
FILE	

38. GEOLOGIC MARKERS

6278' KB

NAME	TOP	
	MEAS. DEPTH	VERT. DEPTH
Honaker Trail	3865'	2413'
Upper Ismay	5060'	1218'
Hovenweep	5158'	1120'
Lower Ismay	5200'	1078'
Gothic Shale	5282'	996'
Upper Desert Creek	5332'	946'
Lower Desert Creek	5408'	870'

CONFIDENTIAL

DATUM

UNITED STATES ~~CONFIDENTIAL~~
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Budget Bureau No. 1004-2135
Expires August 31, 1989

CLASSIFICATION AND SERIAL NO.
U-60520

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. ☐ OIL WELL ☐ GAS WELL ☐ OTHER ☐ Plugged & Abandoned

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
1792' FEL & 2233' FSL

RECEIVED
DEC 22 1989
DIVISION OF
OIL, GAS & MINING

5. IF INDIAN, ALLOTTEE OR TRIBE NAME

6. UNIT AGREEMENT NAME

7. FARM OR LEASE NAME
Sugarloaf

8. WELL NO.
4-1

9. FIELD AND POOL, OR WILDCAT
Wildcat

10. SEC. T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 4, T31S, R23E

11. COUNTY OR PARISH 12. STATE
San Juan Utah

14. PERMIT NO.
43-037-31464

15. ELEVATIONS (Show whether DF, RT, GR, ETC.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	<input type="checkbox"/>	PULL OR ALTER CASING	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	MULTIPLE COMPLETE	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	ABANDON*	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		<input type="checkbox"/>

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
FRACTURE TREATMENT	<input type="checkbox"/>	ALTERING CASING	<input checked="" type="checkbox"/>
SHOOTING OR ACIDIZING	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		<input type="checkbox"/>

(NOTE: Report results of multiple completion up well Completion or Recompletion Report and for for OIL AND GAS

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting and proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

OIL AND GAS	
JRB	GLH
DTS	SLS
1-TAS	
MICROFILM	
2-	FILE

This well was plugged on July 25, 1989, in the following manner:

Plug Number	Description
#1	5512'-5293' 200 sacks
#2	5200'-4993' 855 sacks
#3	3114'-2996' 50 sacks

Set a retainer at 1241' and squeezed 100 sacks below and left 25 sacks on top.

#4 50' - Surface 25 sacks

Installed a dry hole marker.

BLM-Orig & 3--cc: ~~W0000~~ ^{S4D06M}-2, WRF, FMK, WTR-5, SPO, Title & Contract (Houston)

18. I hereby certify that the foregoing is true and correct

SIGNED R P Mealen TITLE Regulatory Coordinator DATE December 7, 1989

(This space for Federal or State office use)

APPROVED BY Kenneth V. Blue TITLE Acting District Mgr DATE 12/12/89
CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

*See Instructions on Reverse Side

Marathon Oil Company
Well No. Sugarloaf 4-1
Sec. 4, T. 31 S., R. 23 E.
San Juan County, Utah
Lease U-60520

CONDITIONS OF APPROVAL

Contact Robert Larsen of the Bureau of Land Management, San Juan Resource Area at (801) 587-2141 for surface reclamation requirements.

Section V. of Onshore Oil and Gas Order No. 1 requires that operators submit three, separate Sundry Notices (Form 3160-5) in relation to the plugging and abandonment of any jurisdictional well, i.e., a Notice of Intent to Abandon (NIA) as a precursor to the commencement of actual abandonment operations or as a written confirmation of an orally prescribed abandonment program; a Subsequent Report of Abandonment (SRA) reflecting the actual downhole abandonment operations performed, which is to be submitted within 30 days of completing those operations; and, a notice from the operator that the required surface reclamation requirements have been completed and, thus, the site is now ready for inspection. Section V. also states that "Final abandonment shall not be approved until the surface reclamation work required by the approved drilling permit or approved abandonment notice (NIA) has been completed to the satisfaction of the San Juan Resource Area."

Accordingly, final approval of an abandoned well has two components:

- 1) Satisfactory completion of the approved downhole plugging plan.
- 2) Satisfactory reclamation of the site.

You will therefore be required to submit a Final Abandonment Notice (Sundry Notice - Form 3160-5) when vegetative reclamation is complete. You will not be released from bond liability on this location until such final abandonment has been approved by the Moab District Office.